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SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: SHANON FOLEY Examiner #: 77851 Date: 9/26/00
Art Unit: 1648 Phone Number 30 8-3983 Serial Number: 09/486,342
Mail Box and Bldg/Room Location: 8B-19 Results Format Preferred (circle): PAPER DISK E-MAIL
→ 8E-12

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: An Attenuated Japanese encephalitis virus adapted to Vero cell and a Japanese encephalitis vaccine

Inventors (please provide full names): There are too many to write - see attachment

Earliest Priority Filing Date: 8/28/97 — 98 - no English translation

For Sequence Searches Only *Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Please search for an attenuated Japanese encephalitis virus adapted to Vero cells. The virus has a multiplicity of more than 1×10^7 PFU/ml in Vero cells & LD_{50}/plaque for a young mouse is less than 10^{-6}.

The Japanese encephalitis virus is CJS0003 & is in a pharmaceutical carrier in an inactivated or attenuated - live - that is part of a vaccine.

Thank you!
Shanon Foley

Please include an inventor name search - thanks.

Point of Contact:
Beverly Shears
Technical Info. Specialist
CM1 12C14 Tel: 308-4994

****

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Searcher: Beverly C4999
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Date Searcher Picked Up: _____
Date Completed: 09.27.00
Searcher Prep & Review Time: 12
Clerical Prep Time: _____
Online Time: 17

Type of Search

NA Sequence (#) _____
AA Sequence (#) _____
Structure (#) _____
Bibliographic _____
Litigation _____
Fulltext _____
Patent Family _____
Other _____

Vendors and cost where applicable

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Dialog _____
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Sequence Systems _____
WWW/Internet _____
Other (specify) _____

PTO-1590 (1-2000)

Foley
09/486392

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FILE COVERS 1967 - 27 Sep 2000 VOL 133 ISS 14
FILE LAST UPDATED: 26 Sep 2000 (20000926/ED)

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-key terms

L1 552 SEA FILE=CAPLUS ABB=ON PLU=ON (JE OR JEV)(S)ENCEPHALIT? OR JAPANESE ENCEPHALIT? OR CJ50003 OR 50003
L2 39 SEA FILE=CAPLUS ABB=ON PLU=ON L1 AND VERO
L5 17 SEA FILE=CAPLUS ABB=ON PLU=ON L2 AND (VACCIN? OR IMMUNIS? OR IMMUNIZ?)

L5 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 2000:629117 CAPLUS
TITLE: Hydrodynamic shear forces increase **Japanese encephalitis** virus production from microcarrier-grown **Vero** cells
AUTHOR(S): Wu, S.-C.; Huang, G. Y.-L.
CORPORATE SOURCE: Department of Life Science, National Tsing Hua University, Hsinchu, 30043, Taiwan
SOURCE: Bioprocess Eng. (2000), 23(3), 229-233
CODEN: BIENEU; ISSN: 0178-515X
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Understanding the effect of hydrodynamic shear forces on microcarrier-attached cells is crit. in several viral **vaccine** prodn. processes, owing to that only the

anchorage-dependent cells can be used for virus propagation in cultures. This study demonstrated that increasing the hydrodynamic shear forces in microcarrier cultures can increase the prodn. of a **vaccine** strain of **Japanese encephalitis** virus (on a per cell basis) in **Vero** cells but not BHK-21. The shear force-enhanced JEV prodn. were highly effective at around 2-3 d post infection and required the concn. of fetal bovine serum supplemented in medium above 2.5%. To our knowledge, this study reports for the first time that increasing the hydrodynamic shear forces on microcarrier-grown cells increases virus prodn. in agitated bioreactor cultures.

L5 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 2000:241450 CAPLUS
DOCUMENT NUMBER: 132:292706
TITLE: Enhanced immunogen for inactivated **vaccine** for infection with **Japanese encephalitis** viruses and process for producing the same
INVENTOR(S): Ishikawa, Toyokazu; Yoshii, Hironori; Onishi, Toshiyuki; Imagawa, Tadashi; Ishibashi, Masahide
PATENT ASSIGNEE(S): The Research Foundation for Microbial Diseases of Osaka University, Japan
SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000020565	A1	20000413	WO 1999-JP2931	19990602

W: AU, CA, CN, IN, JP, KR, SG, US, VN
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: JP 1998-319762 19981005

AB Provided are novel inactivated viral particles which induce higher antibody or antiserum titer by about 2-10 times than the conventional **vaccines** and an enhanced immunogenic envelope protein. The virus is a **Japanese encephalitis** virus ThCMAr67/93 strain or Peking strain, and is suitable for grow in cultured cell line to avoid contamination (e.g. mouse brain-derived toxic substances) and cruelty of using animal. These viral particles are also useful in diagnostics for infection with **Japanese encephalitis** viruses.

REFERENCE COUNT: 9
REFERENCE(S): (1) Immuno Ag; EP 506714 A
(2) Immuno Ag; US 5719051 A

(3) Immuno Ag; WO 9109935 A
(4) Immuno Ag; JP 05502581 A 1993
(8) Shi, H; Virologica Sinica 1998, V13(3), P208 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 2000:197589 CAPLUS
DOCUMENT NUMBER: 132:207030
TITLE: **Japanese encephalitis** virus **(JEV) vaccine.**
INVENTOR(S): Kuzuhara, Shoji; Totsuka, Atsuko; Eto, Akira; Nishiyama, Kiyoto; Shiron, Yoichiro
PATENT ASSIGNEE(S): Chemo-Sero-Therapeutic Research Institute, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000083657	A2	20000328	JP 1999-188308	19990702
PRIORITY APPLN. INFO.:			JP 1998-197040	19980713

AB The JEV is prepd. by infection of the established cell of animal and insect such as African green monkey kidney such as **Vero** and GL37 cells. The infected cell is then grown by still culture, suspension culture, and roller bottle culture. Isolation of the JEV is also given.

L5 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:657157 CAPLUS
DOCUMENT NUMBER: 132:150370
TITLE: **Immunization** with plasmid DNA encoding the envelope glycoprotein of **Japanese Encephalitis** virus confers significant protection against intracerebral viral challenge without inducing detectable antiviral antibodies
AUTHOR(S): Ashok, M. S.; Rangarajan, P. N.
CORPORATE SOURCE: Department of Biochemistry, Indian Institute of Science, Bangalore, 560 012, India
SOURCE: Vaccine (1999), 18(1-2), 68-75
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A plasmid DNA construct, pCMXENV encoding the envelope (E) glycoprotein of **Japanese Encephalitis** virus (

JEV), was constructed. This plasmid expresses the E protein intracellularly, when transfected into **Vero** cells in culture. The ability of pCMXENV to protect mice from lethal JEV infection was evaluated using an intracerebral (i.c.) JEV challenge model. Several independent **immunization** and JEV challenge expts. were carried out and the results indicate that 51 and 59% of the mice are protected from lethal i.c. JEV challenge, when **immunized** with pCMXENV via i.m. and intranasal (i.n.) routes, resp. None of the mice **immunized** with the vector DNA (pCMX) survived in any of these expts. JEV-specific antibodies were not detected in pCMXENV-**immunized** mice either before or after challenge. JEV-specific T cells were obsd. in mice **immunized** with pCMXENV which increased significantly after JEV challenge indicating the presence of **vaccination** -induced memory T cells. Enhanced prodn. of interferon-.gamma. (IFN-.gamma.) and complete absence of interleukin-4 (IL-4) in splenocytes of pCMXENV-**immunized** mice on restimulation with JEV antigens in vitro indicated that the protection is likely to be mediated by T helper (Th) lymphocytes of the Th1 sub-type. In conclusion, our results demonstrate that **immunization** with a plasmid DNA expressing an intracellular form of JEV E protein confers significant protection against i.c. JEV challenge even in the absence of detectable antiviral antibodies.

REFERENCE COUNT: 54
REFERENCE(S):
(1) Abbas, A; Science 1996, V383, P787 CAPLUS
(2) Aihara, H; J Virol 1998, V72, P8032 CAPLUS
(3) Chambers, T; Ann Rev Microbiol 1990, V44, P649 CAPLUS
(4) Daheshia, M; J Immunol 1997, V159, P1945 CAPLUS
(5) Davis, H; Human Gene Therapy 1995, V6, P1447 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:534410 CAPLUS
DOCUMENT NUMBER: 132:120843
TITLE: Study on a purified and inactivated **japanese encephalitis** **vaccine** prepared on **vero** cells using SA14-14-2 attenuated virus strain
AUTHOR(S): Yao, Zhihui; Dong, Guanmu; Yu, Yongxin
CORPORATE SOURCE: National Institute for the Control of Pharmaceutical and Biological Products, Beijing, 100050, Peop. Rep. China
SOURCE: Zhonghua Shiyan He Linchuang Bingduxue Zazhi (1999), 13(2), 191-193
CODEN: ZSLZFS; ISSN: 1003-9279
PUBLISHER: Zhonghua Shiyan He Linchuang Bingduxue Zazhi

Bianjibu
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB A **JE** attenuated virus strain SA14-14-2 was adapted on **Vero** cells for prepn. of purified inactivated **vaccine** to develop a kind of new **Japanese Encephalitis** (**JE**) **vaccine** prepd. on **Vero** cells. Comparison of the growth curves of SA14-14-2 in roller bottle and in spinner flask was made. The cultures were replaced with serum-free MEM, the culture supernatants were harvested on day 2, 4, 6 after inoculation after the virus inoculation and absorption on **Vero** cells for 2 h. The virus fluids were pooled, concd. by 8% PEG, and purified on 15%-60% sucrose d. gradients. The purified virus was inactivated with 0.02% formalin. It showed that virus titer was higher and maintained longer in roller bottle. Mice **vaccinated** twicely with 0.5 .mu.g dose of the purified inactivated **vaccine** induced neutralizing antibody titers equal to that of the mice **vaccinated** with primary hamster kidney inactivated **vaccine**. This inactivated JE **vaccine** prepd. from SA14-14-2 strain-infected **Vero** cell could be used for human as a kind of new JE **vaccine**.

L5 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:253109 CAPLUS
DOCUMENT NUMBER: 131:86613
TITLE: Recombinant, chimeric live, attenuated **vaccine** (ChimeriVax) incorporating the envelope genes of **Japanese encephalitis** (SA14-14-2) virus and the capsid and nonstructural genes of yellow fever (17D) virus is safe, immunogenic and protective in non-human primates
AUTHOR(S): Monath, T. P.; Soike, K.; Levenbook, I.; Zhang, Z.-X.; Arroyo, J.; Delagrave, S.; Myers, G.; Barrett, A. D. T.; Shope, R. E.; Ratterree, M.; Chambers, T. J.; Guirakhoo, F.
CORPORATE SOURCE: OraVax Inc., Cambridge, MA, 02139, USA
SOURCE: Vaccine (1999), 17(15-16), 1869-1882
CODEN: VACCDE; ISSN: 0264-410X
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Yellow fever 17D virus, a safe and effective live, attenuated **vaccine**, was used as a vector for genes encoding the protective antigenic determinants of a heterologous member of the genus Flavivirus, **Japanese encephalitis** (**JE**) virus, the leading cause of acute viral central nervous system infection and death throughout Asia. The viral envelope (prM

and E) genes of a full-length cDNA clone of YF 17D virus were replaced with the corresponding genes of JE SA14-14-2, a strain licensed as a live, attenuated **vaccine** in China. Full-length RNA transcripts of the YF/JE chimaera were used to transfect **Vero** cells. The progeny virus (named "ChimeriVax-JE"), was used to define safety after intracerebral (IC) inoculation of rhesus monkeys. Monkeys (N = 3) inoculated with a high dose (6.6 log10 pfu) developed a brief viremia, showed no signs of illness, developed high titers of anti-JE neutralizing antibody, and had minimal brain and spinal cord lesion scores according to criteria specified in the WHO monkey neurovirulence test. A control group of 3 monkeys that received a lower dose (4.2 log10 pfu) of com. YF 17D **vaccine** had slightly higher lesion scores. To develop a lethal monkey model of JE for **vaccine** protection tests, we inoculated groups of monkeys IC or intranasally (IN) with a JE virus strain found to be highly neurovirulent and neuroinvasive for mice. Monkeys inoculated IC, but not IN, developed severe encephalitis after an incubation period of 8-13 days. The ChimeriVax-JE virus was passed in a cell line acceptable for human use (diploid fetal rhesus lung) and 4.3 or 5.3 log10 pfu were inoculated into groups of 3 monkeys by the s.c. route. All 6 animals developed brief viremias (peak titer < 2.0 log10 pfu/mL) and subsequently had anti-JE but no yellow fever neutralizing antibodies. On day 64, the monkeys were challenged IC with 5.5 log10 pfu of virulent JE virus. The **immunized** animals had no detectable viremia post-challenge, whereas 4 unimmunized controls became viremic. Only 1 of 6 (17%) **vaccinated** monkeys but 4 of 4 (100%) unvaccinated controls developed encephalitis. Histopathol. examn. 30 days after challenge confirmed that the protected, **immunized** animals had no or minimal evidence of encephalitis. These data demonstrated the ability of the ChimeriVax-JE to induce a rapid humoral immune response and to protect against a very severe, direct intracerebral virus challenge. Target areas of neuronal damage and inflammation in monkeys infected IC with wild-type JE, the chimeric virus and YF 17D were similar, indicating that the histopathol. scoring system used for the WHO yellow fever monkey neurovirulence test will be applicable to control testing of chimeric seed viruses and **vaccines**.

REFERENCE COUNT: 44

REFERENCE(S):

(1) Aihara, H; J Virol 1998, V72, P8032 CAPLUS
(2) Aihara, S; Virus Genes 1991, V5, P95 CAPLUS
(3) Barrett, A; Biologicals 1997, V25, P17 CAPLUS
(13) Konishi, E; J Virol 1998, V72, P4925 CAPLUS
(14) Kreil, T; J Virol 1998, V72, P3076 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:189180 CAPLUS

Searcher : Shears 308-4994

DOCUMENT NUMBER: 130:213608
TITLE: An attenuated **Japanese encephalitis** virus adapted to **Vero** cell and a **Japanese encephalitis vaccine**
INVENTOR(S): Kim, Hyun Su; Yoo, Wang Don; Kim, Soo Ok; Lee, Sung Hee; Moon, Sang Bum; Hong, Sun Pyo; Shin, Yong Cheol; Chung, Yong Ju; Eckels, Kenneth H.; Innis, Bruce; Putnak, Joseph R.; Binn, Leonard N.; Srivastava, Ashok K.; Dubois, Doria R.
PATENT ASSIGNEE(S): Cheil Jedang Corporation, S. Korea; Walter Reed Army Institute of Research
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9911762	A1	19990311	WO 1998-KR259	19980825
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9890047	A1	19990322	AU 1998-90047	19980825
EP 1025209	A1	20000809	EP 1998-941885	19980825
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
PRIORITY APPLN. INFO.:			KR 1997-42001	19970828
			KR 1997-42002	19970828
			WO 1998-KR259	19980825

AB SThe present invention relates to an attenuated **Japanese encephalitis** virus adapted to **Vero** cell by passages on **Vero** cell and a **Japanese encephalitis vaccine** comprising said attenuated virus. **Japanese encephalitis** virus adapted to **Vero** cell after 4 passage was used for prepn. of a **vaccine**. The titer of neutralizing antibodies (the reciprocal of serum diln. resulting in 50% redn. of mouse brain passaged Nakayama virus plaques) for both purified, inactivated virus (PIV) and live, attenuated virus in mice at a dose of 5 .mu.g was 1:320. Mice were **immunized** with 2 inoculations of test **vaccines** (comprising PIV) spaced 3 wk apart, then

challenged with 500 pfu of mouse-neurovirulent Nakayama virus. Mice **immunized** with 500 ng of PIV or 50 ng PIV and alum showed 100% protection.

REFERENCE COUNT: 3

REFERENCE(S):
(1) Division Of Microbiology; EP 0562136 A1 1993
(2) Nippon Zoki Pharmaceut Co Ltd; JP 01117780 A 1989
(3) Tekada Chem Ind Ltd; JP 02223531 A 1990

L5 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:761290 CAPLUS
DOCUMENT NUMBER: 130:200793
TITLE: Large scale purification of inactivated **Japanese encephalitis vaccine** from **Vero** cells by zonal centrifugation
AUTHOR(S): Shi, Huiyin; Ding, Zhifeng; Zhao, Min; Pang, Chenghua; Yang, Kangkang; Li, Jin
CORPORATE SOURCE: National Vaccine and Serum Institute, Beijing, 100024, Peop. Rep. China
SOURCE: Zhongguo Bingduxue (1998), 13(3), 208-213
CODEN: ZBINER; ISSN: 1003-5125
PUBLISHER: Kexue Chubanshe
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The **Japanese encephalitis vaccine** in **Vero** cell was easily purified by zonal centrifugation at non-continuous sucrose gradients of 36 and 60%, 32600 g for 4 h. The calf serum protein and other nonviral proteins in the **vaccine** were almost all sepd. from the JE virus. The residue calf serum protein was < 0.5 .mu.g/mL, and the total protein was < 30 mg/mL; and the residue **vero** cell **vero** cell DNA in the **vaccine** was < 100 pg/0.5 mL. The titer of the purified **vaccine** was 6 times higher vs. the Chinese control **vaccine**. The results suggest that the method is valid to purify JE **vaccine** from **vero** cells in large scale because of its simple, rapid, and inexpensive nature.

L5 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:755288 CAPLUS
DOCUMENT NUMBER: 130:195818
TITLE: Comparisons of microcarrier cell culture processes in one hundred mini-liter spinner flask and fifteen-liter bioreactor cultures
AUTHOR(S): Wu, Suh-Chin; Hsieh, Wen-Chin; Liau, Ming-Yi
CORPORATE SOURCE: Department of Life Science, National Tsing Hua University, Hsinchu, Taiwan
SOURCE: Bioprocess Eng. (1998), 19(6), 431-434
CODEN: BIENEU; ISSN: 0178-515X

PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Microcarrier cell culture process can be used to culture anchorage-dependent cells in large bioreactor vessels. The process performance in large bioreactors is usually less prominent than that in spinner flask vessels and bench scale reactors. In this study we investigated the microcarrier cell culture processes in 100 mL spinner flask and 15-L bioreactor cultures, including the kinetics for cell attachment, cell growth and the prodn. of **Japanese encephalitis vaccine** strain (Beijing-1) virus. Under a fixed concn. of microcarrier and cell d. used in inoculations, the attachment kinetics of **Vero** cells on Cytodex 1 microcarrier in a 15-L bioreactor vessel was 2 folds slower than with 100 mL spinner flask culture. Virus replication in 15-L bioreactor culture also revealed an approx. one day lag-time compared to 100 mL spinner flask culture. Findings presented herein provide valuable information for designing and operating microcarrier cell culture processes in large bioreactor vessels.
REFERENCE COUNT: 10
REFERENCE(S): (1) Aunins, J; BHR Group Conference Series 1993, P175 CAPLUS
(4) Himes, V; Biotechnol Bioeng 1987, V29, P1155 CAPLUS
(5) Hu, W; Biotechnol Bioeng 1985, V27, P1466 CAPLUS
(6) Montagnon, B; Developments in Biological Standardization 1981, V47, P55 MEDLINE
(10) Venkat, R; Biotech Bioeng 1996, V49, P456 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:733317 CAPLUS
DOCUMENT NUMBER: 130:121894
TITLE: Characterization of an attenuated **Japanese encephalitis** virus adapted to African green monkey kidney cells, **Vero**
AUTHOR(S): Chung, Yong-Ju; Hong, Sun Pyo; Moon, Sang Beom; Shin, Young-Cheol; Kim, Soo-Ok
CORPORATE SOURCE: R & D Center, Cheiljedang Corp., Kyonggi-Do, 467-810, S. Korea
SOURCE: J. Microbiol. (Seoul) (1998), 36(3), 189-195
CODEN: JOMIFG; ISSN: 1225-8873
PUBLISHER: Microbiological Society of Korea
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Live attenuated **Japanese encephalitis** (

JE) virus SA14-14-2 produced in primary dog kidney cells (PDK) was adapted to African green monkey kidney cells, **Vero**. In an effort to gain insight into the mol. basis of the biol. characteristics of the isolated SA14-14-2 (**Vero**) strain, the 1500 nucleotide sequence encoding the envelope (E) gene which possesses major neutralizing epitopes was detd. and compared with the sequences of two other attenuated JE virus strains, SA14-14-2 (PHK) and SA14-14-2 (PDK). The amino acid sequence of the C-terminal region (a.a. 280-500) of the SA14-14-2 (**Vero**) E gene was identical to those of strains SA14-14-2 (PHK) and SA14-14-2 (PDK), while the N-terminal region (a.a. 1-279) showed sequence variation. The distribution of mutations in the N-terminal region was nearly the same among the three attenuated strains, suggesting that the N-terminal sequences might be related with virus-host cell specificity. However, it was found that Lys and Val (a.a.138 and 176, resp.), known to be responsible for attenuation, are still conserved in SA14-14-2 (**Vero**). Animal testing showed that SA14-14-2 (**Vero**) has a neurovirulence phenotype similar to that of the parent SA14-14-2 (PDK) strain in suckling mice. The SA14-14-2 (**Vero**) grew very efficiently in **Vero** cells enough to support **vaccine** prodn. The growth characteristics of SA14-14-2 (**Vero**) in **Vero** cell and conservation of attenuation determinant of neurovirulence support that SA14-14-2 (**Vero**) could be developed as a new **vaccine** strain for human use.

REFERENCE COUNT: 20
REFERENCE(S):
(8) Hasegawa, H; Virology 1992, V191, P158 CAPLUS
(9) Heinz, F; Adv Virus Res 1986, V31, P103 CAPLUS
(10) Holzmann, H; J Virol 1990, V64, P5156 CAPLUS
(12) Ni, H; J Gen Virol 1995, V76, P401 CAPLUS
(13) Ni, H; J Gen Virol 1995, V76, P409 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:615676 CAPLUS
DOCUMENT NUMBER: 130:64959
TITLE: Production of purified **Japanese encephalitis vaccine** from **vero** cells with roller bottles
AUTHOR(S): Ding, Zhifen; Shi, Huiying; Pang, Chenghua; Chang, Zhenyan; Zhao, Min; Li, Jing; Yang, Kangkang; Liu, Peisheng
CORPORATE SOURCE: National Vaccine + Serum Institute, Beijing, 100024, Peop. Rep. China
SOURCE: Zhonghua Yixue Zazhi (1998), 78(4), 261-262
CODEN: CHHTAT; ISSN: 0376-2491
Searcher : Shears 308-4994

PUBLISHER: Zhonghua Yixue Zazhi
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The prodn. process of purified **Japanese encephalitis** (**JE**) **vaccine** from **Vero** cells cultivated in roller bottles was studied to improve the quality of **JE vaccine**. The 15L roller bottles were used for propagation of **Vero** cells and JE virus, then the virus was inactivated, concd., treated by protamine sulfate, purified by sucrose gradient d. centrifugation and lyophilized as final product. Three batches of high quality lyophilized **vaccine** were produced. The quality control tests of **vaccine** for human use were passed. It is feasible to use roller bottles to cultivate continuous cell line-**Vero** cells for JE **vaccine** prodn.

L5 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:467590 CAPLUS
DOCUMENT NUMBER: 129:213886
TITLE: Antigenic characterization of nine wild-type Taiwanese isolates of **Japanese encephalitis** virus as compared with two **vaccine** strains
AUTHOR(S): Wu, Suh-Chin; Lian, Wei-Cheng; Hsu, Li-Ching; Wu, Ying-Chang; Liau, Ming-Yi
CORPORATE SOURCE: Department of Life Science, National Tsing Hua University, Hsinchu, Taiwan
SOURCE: Virus Res. (1998), 55(1), 83-91
CODEN: VIREDF; ISSN: 0168-1702
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The antigenic properties of nine wild-type **Japanese encephalitis** viruses isolated in Taiwan during 1990-1994 were investigated by comparison with two inactivated **vaccine** strains (Beijing-1, Nakayama-NIH). All of the nine Taiwanese isolates were found to induce higher cytopathol. in **Vero** cells but showed similar mouse virulence as the two **vaccine** strains. Antigenic characterization using six E protein-specific monoclonal antibodies shows two of the nine wild-type isolates (i.e. CH1949 and CH2195) presented different antigenic properties of hemagglutination inhibition and plaque redn. neutralization. The E-protein gene nucleotide sequences of CH1949 and CH2195 were detd. and compared with other published sequences of the two **vaccine** strains and other 19 Asian/Taiwanese isolates. Phylogenetic tree anal. indicates these two wild-type Taiwanese isolates are more distant from the two **vaccine** strains.

L5 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:78333 CAPLUS
DOCUMENT NUMBER: 128:191087
TITLE: Attenuation of **Japanese encephalitis** virus by selection of its mouse brain membrane receptor preparation escape variants
AUTHOR(S): Ni, Haolin; Barrett, Alan D. T.
CORPORATE SOURCE: Department of Pathology and Center for Tropical Diseases, University of Texas Medical Branch, Galveston, TX, 77555-0609, USA
SOURCE: Virology (1998), 241(1), 30-36
CODEN: VIRLAX; ISSN: 0042-6822
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Six variants of **Japanese encephalitis** (**JE**) virus strain P3 were selected for resistance to binding to mouse brain membrane receptor prepns. (MRP). All but one of these MRP escape (MRPR) variants were significantly attenuated in mice for both neuroinvasiveness (>200-fold) and neurovirulence (>500-fold) compared to their parent virus. Attenuated mouse brain MRPR variants could be detected in the sera of mice following either intracerebral (i.c.) or i.p. inoculation, whereas virus was detected only in brains of mice following ic inoculation. **Immunization** of mice with MRPRs induced neutralizing antibodies and protected mice against challenge with wild-type JE virus. A common amino acid mutation was found in the envelope (E) protein gene of all attenuated mouse brain MRPR variants at residue E-306 compared to P3 virus grown in mosquito C6-36 cells or plaque purified and amplified in monkey kidney **Vero** cells. This amino acid is putatively responsible for attenuation due to alteration in binding of JE virus to its cell receptor in mouse brain. The methodol. developed in this study has general applicability to the attenuation of virulence of viruses and to the identification of agents that will block amino acids in a viral attachment protein(s) that interacts with cell receptors.

L5 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1998:72882 CAPLUS
DOCUMENT NUMBER: 128:225720
TITLE: Inhibitory effect of furanonaphthoquinone derivatives on the replication of **Japanese encephalitis** virus
AUTHOR(S): Takegami, Tsutomu; Simamura, Eriko; Hirai, Kei-Ichi; Koyama, Junko
CORPORATE SOURCE: Uchinada, Medical Research Institute Kanazawa Medical University, Ishikawa, 920-02, Japan
SOURCE: Antiviral Res. (1998), 37(1), 37-45
CODEN: ARSRDR; ISSN: 0166-3542

PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Japanese encephalitis** still occurs in endemic and epidemic forms over a wide area of Asia. Although the **vaccine** against **Japanese encephalitis** virus (**JEV**) is widely used, no antiviral drug has been reported. The authors used several different kinds of furanonaphthoquinone derivs. and found antiviral activity against JEV. Esp., 2-methylnaphtho[2,3-b]furan-4,9-dione (FNQ3) indicated the highest antiviral activity, followed by 2-(1-hydroxyethyl)-, 5(or 8)-hydroxy-, and 2-methyl-5(or 8)-hydroxy-analogs of naphtho[2,3-b]furan-4,9-dione. In the presence of 3 .mu.g/mL FNQ3, the virus yields in **Vero** cells were 2.times.105 PFU/mL at 24 h after infecting with the virus and 10 of the control level. Western blot anal. using anti-E rabbit sera or anti-NS3 showed that the expression of viral proteins was inhibited by treatment with FNQ3. In addn., Northern blot anal. indicated that the appearance of JEV-RNA was also inhibited by FNQ3. These results suggest that FNQ3 inhibits JEV replication through viral RNA and protein synthesis.

L5 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:224363 CAPLUS
DOCUMENT NUMBER: 126:209287
TITLE: Virus purification by chromatography
INVENTOR(S): Fanget, Bernard; Francon, Alain
PATENT ASSIGNEE(S): Pasteur Merieux Serums Et Vaccins, Fr.; Fanget, Bernard; Francon, Alain
SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9706243	A1	19970220	WO 1996-FR1064	19960708
W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA				
FR 2737730	A1	19970214	FR 1995-9851	19950810
FR 2737730	B1	19970905		
CA 2226312	AA	19970220	CA 1996-2226312	19960708

Searcher : Shears 308-4994

AU 9664964	A1	19970305	AU 1996-64964	19960708
AU 712490	B2	19991111		
EP 848752	A1	19980624	EP 1996-924954	19960708
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
CN 1199419	A	19981118	CN 1996-197568	19960708
BR 9609837	A	19990309	BR 1996-9837	19960708
US 6008036	A	19991228	US 1998-11503	19980522
PRIORITY APPLN. INFO.:			FR 1995-9851	19950810
			WO 1996-FR1064	19960708

AB A method for purifying viruses from a cell line (**VERO**) culture by chromatog. is disclosed that comprises an anion-exchange chromatog. step followed by a cation-exchange chromatog. step and optionally a metal-binding affinity chromatog. step. The method is particularly suitable for producing viruses for use in **vaccines**.

L5 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1993:470348 CAPLUS
DOCUMENT NUMBER: 119:70348
TITLE: Flavivirus **vaccines** using poxvirus expression vectors
INVENTOR(S): Paoletti, Enzo; Pincus, Steven Elliot
PATENT ASSIGNEE(S): Virogenetics Corp., USA
SOURCE: PCT Int. Appl., 117 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 34
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9203545	A1	19920305	WO 1991-US5816	19910815
W: AU, GB, JP, KR				
US 5514375	A	19960507	US 1991-714687	19910613
AU 9187287	A1	19920317	AU 1991-87287	19910815
AU 657711	B2	19950323		
GB 2269820	A1	19940223	GB 1993-3023	19910815
GB 2269820	B2	19950329		
JP 06503227	T2	19940414	JP 1991-516619	19910815
AU 9931252	A1	19990916	AU 1999-31252	19990525
PRIORITY APPLN. INFO.:			US 1990-567960	19900815
			US 1991-711429	19910606
			US 1991-714687	19910613
			US 1991-729800	19910717
			US 1991-666056	19910307
			US 1991-713967	19910611
			WO 1991-US5816	19910815

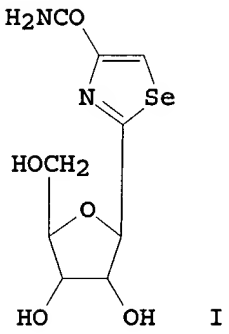
Searcher : Shears 308-4994

AU 1995-22755 19950406

AB Poxvirus that carry structural proteins of flavivirus are prepd. for use in **vaccines** by expression of the modified genome in animal cell culture. **Japanese encephalitis** virus (**JEV**) genes encoding the proteins M, E, NS1, and NS2 were introduced into a thymidine kinase-deficient **vaccinia** virus (Copenhagen strain) and these viruses introduced into BHK cells. The JEV NS1 gene was expressed in these cells and the protein product was properly processed. Similarly, the hemagglutinin (E protein) gene was also correctly expressed. One of the recombinant **vaccinia** viruses directed secretion of empty **vaccinia** virus particles contg. the JEV E and M proteins. These virus particles were able to induce protective antibodies in mice. The construction of a **vaccinia** virus lacking a no. of pathogenesis-related functions for use as a host is described.

L5 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER:	1983:591523 CAPLUS
DOCUMENT NUMBER:	99:191523
TITLE:	Broad-spectrum antiviral activity of 2-.beta.-D-ribofuranosylselenazole-4-carboxamide, a new antiviral agent
AUTHOR(S):	Kirsi, Jorma J.; North, James A.; McKernan, Patricia A.; Murray, Byron K.; Canonico, Peter G.; Huggins, John W.; Srivastava, Prem C.; Robins, Roland K.
CORPORATE SOURCE:	Dep. Microbiol., Brigham Young Univ., Provo, UT, 84602, USA
SOURCE:	Antimicrob. Agents Chemother. (1983), 24(3), 353-61 CODEN: AMACCQ; ISSN: 0066-4804
DOCUMENT TYPE:	Journal
LANGUAGE:	English
GI	



I

AB The relative in vitro antiviral activities of 3 related nucleoside carboxamides, ribavirin, tiazofurin, and selenazole (2-.beta.-D-ribofuranosylselenazole-4-carboxamide) (I), were studied against selected DNA and RNA viruses. Although the activity of selenazole against different viruses varied, it was significantly more potent than ribavirin and tiazofurin against all tested representatives of the families Paramyxoviridae (parainfluenza virus type 3, mumps virus, measles virus), Reoviridae (reovirus type 3), Poxviridae (**vaccinia** virus), Herpesviridae (herpes simplex virus types 1 and 2), Togaviridae (Venezuelan equine encephalomyelitis virus, yellow fever virus, **Japanese encephalitis** virus), Bunyaviridae (Rift Valley fever virus, sandfly fever virus, Korean hemorrhagic fever virus), Arenaviridae (Pichinde virus), Picornaviridae (coxsackie viruses B1 and B4, echovirus type 6, encephalomyocarditis virus), Adenoviridae (adenovirus type 2), and Rhabdoviridae (vesicular stomatitis virus). The antiviral activity of selenazole was also cell line-dependent, being greatest in HeLa, **Vero**-76, and **Vero** E6 cells. Selenazole was relatively nontoxic for **Vero**, **Vero**-76, **Vero** E6, and HeLa cells at concns. of .ltoreq.1000 .mu.g/mL. The relative plating efficiency at that concn. was >90%. The effects of selenazole on viral replication were greatest when this agent was present at the time of viral infection. The removal of selenazole from the medium of infected cells did not reverse the antiviral effect against **vaccinia** virus, but there was a gradual resumption of viral replication in cells infected with parainfluenza type 3 or herpes simplex virus type 1. However, the antiviral activity of ribavirin against the same viruses was reversible when the drug was removed.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, TOXLIT, TOXLINE, PHIC, PHIN' ENTERED AT 11:58:34 ON 27 SEP 2000)

L6 233 S L2

L7 64 S L6 AND (VACCIN? OR IMMUNIS? OR IMMUNIZ?)

Searcher : Shears 308-4994

L8 42 DUP REM L7 (22 DUPLICATES REMOVED)

L8 ANSWER 1 OF 42 COPYRIGHT 2000 PJB

ACCESSION NUMBER: 2000:15785 PHIC
DOCUMENT NUMBER: S00680498
DATA ENTRY DATE: 22 Sep 2000
TITLE: Peptide to change name and list on Nasdaq
SOURCE: Scrip (2000)
DOCUMENT TYPE: Newsletter
FILE SEGMENT: FULL

L8 ANSWER 2 OF 42 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-303759 [26] WPIDS
DOC. NO. CPI: C2000-092278
TITLE: Novel inactivated viral particles, useful as **vaccines** against and in the diagnosis of infection with **Japanese encephalitis** viruses, is prepared from an infective cell culture of a **Japanese encephalitis** virus.
DERWENT CLASS: B04 D16
INVENTOR(S): IMAGAWA, T; ISHIBASHI, M; ISHIKAWA, T; ONISHI, T; YOSHII, H
PATENT ASSIGNEE(S): (OSAU) UNIV OSAKA
COUNTRY COUNT: 27
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000020565	A1	20000413	(200026)*	JA	42
RW: AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
W: AU CA CN IN JP KR SG US VN					
AU 9940578	A	20000426	(200036)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000020565	A1	WO 1999-JP2931	19990602
AU 9940578	A	AU 1999-40578	19990602

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9940578	A	Based on	WO 200020565

PRIORITY APPLN. INFO: JP 1998-319762 19981005

Searcher : Shears 308-4994

AN 2000-303759 [26] WPIDS
AB WO 200020565 A UPAB: 20000531
NOVELTY - Inactivated immunogenic viral particles (I) prepared from an infective cell culture of a **Japanese encephalitis** virus are new.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:
(1) producing (I) comprising culturing a cell line infected with a virus belonging to the **Japanese encephalitis** viruses, inactivating and then purifying the cell culture;
(2) an inactivated **vaccine** comprising (I); and
(3) a diagnostic agent for **Japanese encephalitis** viruses comprising all or a part of (I) as an antigen.
ACTIVITY - Antiviral; immunomodulatory.
MECHANISM OF ACTION - **Vaccine**. No biological data is given.
USE - (I) are useful for treatment, diagnosis and as **vaccines** against **Japanese encephalitis** virus infection (claimed).
ADVANTAGE - The neutralization antibody potency of antiserum produced by **immunization** with the new viral particles (I) is 2 to 10 times as much as the conventional **vaccines** cultured in mouse brain. The new viral particles can be produced on a large scale and at low cost without sacrificing mice.
Dwg.0/1

L8 ANSWER 3 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 2000:420505 SCISEARCH
THE GENUINE ARTICLE: 317RL
TITLE: Recombinant chimeric yellow fever-dengue type 2 virus is immunogenic and protective in nonhuman primates
AUTHOR: Guirakhoo F (Reprint); Weltzin R; Chambers T J; Zhang Z X; Soike K; Ratterree M; Arroyo J; Georgakopoulos K; Catalan J; Monath T P
CORPORATE SOURCE: ORAVAX INC, 38 SIDNEY ST, CAMBRIDGE, MA 02139 (Reprint); ST LOUIS UNIV, SCH MED, DEPT MOL MICROBIOL & IMMUNOL, ST LOUIS, MO 63104; TULANE REG PRIMATE RES CTR, COVINGTON, LA 70433
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF VIROLOGY, (JUN 2000) Vol. 74, No. 12, pp. 5477-5485.
Publisher: AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904.
ISSN: 0022-538X.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE

LANGUAGE: English
REFERENCE COUNT: 32
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB A chimeric yellow fever (YF)-dengue type 2 (dengue-2) virus (ChimeriVax-D2) was constructed using a recombinant cDNA infectious clone of a YF **vaccine** strain (YF 17D) as a backbone into which we inserted the premembrane (prM) and envelope (E) genes of dengue-2 virus (strain PUO-218 from a case of dengue fever in Bangkok, Thailand). The chimeric virus was recovered from the supernatant of **Vero** cells transfected with RNA transcripts and amplified once in these cells to yield a titer of 6.3 log(10) PFU/ml, The ChimeriVax-D2 was not neurovirulent for 4-week-old outbred mice inoculated intracerebrally, This virus was evaluated in rhesus monkeys for its safety (induction of viremia) and protective efficacy (induction of anti-dengue-2 neutralizing antibodies and protection against challenge). In one experiment, groups of non-YF-immune monkeys received graded doses of ChimeriVax-D2; a control group received only the **vaccine** diluents, All monkeys (except the control group) developed a brief viremia and showed no signs of illness. Sixty-two days postimmunization, animals were challenged with 5.0 log(10) focus forming units (FFU) of a wild-type dengue-2 virus. No viremia (<1.7 log(10) FFU/ml) was detected in any **vaccinated** group, whereas ail animals in the placebo control group developed viremia. All **vaccinated** monkeys developed neutralizing antibodies in a dose-dependent response. In another experiment, viremia and production of neutralizing antibodies were determined in YF-immune monkeys that received either ChimeriVax-D2 or a wild-type dengue-2 virus, Low viremia was detected in ChimeriVax-D2-inoculated monkeys, whereas all dengue-2-**immunized** animals became viremic, All of these animals were protected against challenge with a wild-type dengue-2 virus, whereas all YF-immune monkeys and nonimmune controls became viremic upon challenge. Genetic stability of ChimeriVax-D2 was assessed by continuous In vitro passage in VeroPM cells, The titer of ChimeriVax-D2, the attenuated phenotype for 4-week-old mice, and the sequence of the inserted prME genes were unchanged after 18 passages in **Vero** cells. The high replication efficiency, attenuation phenotype in mice and monkeys, immunogenicity and protective efficacy, and genomic stability of ChimeriVax-D2 justify it as a novel **vaccine** candidate to be evaluated in humans.

L8 ANSWER 4 OF 42 MEDLINE
ACCESSION NUMBER: 2000219418 MEDLINE
DOCUMENT NUMBER: 20219418
TITLE: A single intramuscular injection of recombinant plasmid DNA induces protective immunity and prevents **Japanese encephalitis** in mice.
AUTHOR: Chang G J; Hunt A R; Davis B

CORPORATE SOURCE: Division of Vector-Borne Infectious Diseases, Centers for Disease Control and Prevention, Public Health Service, U.S. Department of Health and Human Services, Fort Collins, Colorado 80522, USA.. gxc7@cdc.gov
SOURCE: JOURNAL OF VIROLOGY, (2000 May) 74 (9) 4244-52. Journal code: KCV. ISSN: 0022-538X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 200007
ENTRY WEEK: 20000703

AB Plasmid vectors containing **Japanese encephalitis** virus (**JEV**) premembrane (prM) and envelope (E) genes were constructed that expressed prM and E proteins under the control of a cytomegalovirus immediate-early gene promoter. COS-1 cells transformed with this plasmid vector (**JE**-4B clone) secreted **JEV**-specific extracellular particles (EPs) into the culture media. Groups of outbred ICR mice were given one or two doses of recombinant plasmid DNA or two doses of the commercial **vaccine** JEVAX. All mice that received one or two doses of DNA **vaccine** maintained **JEV**-specific antibodies 18 months after initial **immunization**. JEVAX induced 100% seroconversion in 3-week-old mice; however, none of the 3-day-old mice had enzyme-linked immunosorbent assay titers higher than 1:400. Female mice **immunized** with this DNA **vaccine** developed plaque reduction neutralization antibody titers of between 1:20 and 1:160 and provided 45 to 100% passive protection to their progeny following intraperitoneal challenge with 5,000 PFU of virulent **JEV** strain SA14. Seven-week-old adult mice that had received a single dose of **JEV** DNA **vaccine** when 3 days of age were completely protected from a 50, 000-PFU **JEV** intraperitoneal challenge. These results demonstrate that a recombinant plasmid DNA which produced **JEV** EPs in vitro is an effective **vaccine**.

L8 ANSWER 5 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 2000:684479 SCISEARCH
THE GENUINE ARTICLE: 350RL
TITLE: Dengue NS1-specific antibody responses: Isotype distribution and serotyping in patients with dengue fever and dengue hemorrhagic fever
AUTHOR: Shu P Y; Chen L K; Chang S F; Yueh Y Y; Chow L; Chien L J; Chin C; Lin T H; Huang J H (Reprint)
CORPORATE SOURCE: CTR DIS CONTROL, DIV VECTOR BORNE INFECT DIS, DEPT HLTH, 161 KUN YANG ST, NAN KANG DIST, TAIPEI 115, TAIWAN (Reprint); CTR DIS CONTROL, DIV VECTOR BORNE INFECT DIS, DEPT HLTH, TAIPEI 115, TAIWAN; TZU CHI

COLL MED, DEPT EMERGENCY MED, HUALIEN, TAIWAN; NATL DEF MED CTR, GRAD INST LIFE SCI, TAIPEI, TAIWAN
COUNTRY OF AUTHOR: TAIWAN
SOURCE: JOURNAL OF MEDICAL VIROLOGY, (OCT 2000) Vol. 62, No. 2, pp. 224-232.
Publisher: WILEY-LISS, DIV JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK, NY 10158-0012.
ISSN: 0146-6615.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 38

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB To understand the antibody responses to dengue (DEN) nonstructural 1 (NS1) glycoprotein and their roles in protective immunity or pathogenesis of dengue fever (DF) and dengue hemorrhagic fever (DHF), we have analyzed the NS1-specific IgM, IgA and IgG antibodies from patients with DF and DHF. An isotype-specific, indirect enzyme-linked immunosorbent assay (ELISA) was established by coating a NS1-specific monoclonal antibody (MAb), D2/8-1, to capture soluble NS1 antigens secreted in the culture supernatants of **Vero** cells infected with DEN virus. We observed strong anti-NS1 antibody responses in all of the convalescent sera of patients with DF and DHF. Similar NS1-specific isotypic and serotypic antibody responses were found in the sera from DF and DHF patients. The results showed that all DEN infections induced significant NS1-specific IgG, whereas 75% and 60% of primary DF patients vs. 40% and 90% of secondary DF patients produced IgM and IgA antibodies, respectively. Specificity analysis showed that DEN NS1-specific IgG and IgA antibodies cross-react strongly to **Japanese encephalitis** (**JE**) virus NS1 glycoprotein, whereas DEN NS1-specific IgM antibodies do not crossreact to **JE** virus NS1 glycoprotein at ail. The serotype specificity of NS1-specific ISM, IgA and IgG were found to be 80%, 67% and 75% for primary infections, and 50%, 22% and 30% for secondary infections in positive samples of DF patients. Similar pattern was found in DHF patients. The results showed that all of the DF and DHF patients produced significant NS1-specific antibodies. We did not observe direct correlation between the anti-NS1 antibody responses and DHF because sera from patients with DF and DHF showed similar anti- NS1 antibody responses. (C) 2000 Wiley-Liss, Inc.

L8 ANSWER 6 OF 42 COPYRIGHT 2000 PJB

ACCESSION NUMBER: 1999:16407 PHIN
DOCUMENT NUMBER: P00636970
DATA ENTRY DATE: 24 Sep 1999
TITLE: Nipah 101

SOURCE: Animal-Pharm (1999) No. 429 p15
DOCUMENT TYPE: Newsletter
FILE SEGMENT: FULL

L8 ANSWER 7 OF 42 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-243619 [20] WPIDS
DOC. NO. CPI: C1999-071001
TITLE: Attenuated **Japanese encephalitis**

DERWENT CLASS: B04 D16
INVENTOR(S): BINN, L N; CHUNG, Y J; DUBOIS, D R; ECKELS, K H; HONG, S P; INNIS, B; KIM, H S; KIM, S O; LEE, S H; MOON, S B; PUTNAK, J R; SHIN, Y C; SRIVASTAVA, A K; YOO, W D
PATENT ASSIGNEE(S): (CHEI-N) CHEIL JEDANG CORP; (REED-N) REED ARMY INST RES WALTER; (CHEI-N) CHEIL JEDANG CO; (CHEI-N) CHEIL FOODS & CHEM INC
COUNTRY COUNT: 83
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9911762	A1	19990311	(199920)*	EN	34
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
AU 9890047	A	19990322	(199931)		
KR 99023955	A	19990325	(200024)		
EP 1025209	A1	20000809	(200039)	EN	
R: BE CH DE DK ES FR GB IT LI NL					

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9911762	A1	WO 1998-KR259	19980825
AU 9890047	A	AU 1998-90047	19980825
KR 99023955	A	KR 1998-35007	19980827
EP 1025209	A1	EP 1998-941885	19980825
		WO 1998-KR259	19980825

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9890047	A	Based on	WO 9911762

Searcher : Shears 308-4994

EP 1025209 A1 Based on WO 9911762

PRIORITY APPLN. INFO: KR 1997-42002 19970828; KR 1997-42001 19970828

AN 1999-243619 [20] WPIDS

AB WO 9911762 A UPAB: 19990525

NOVELTY - Attenuated **Japanese encephalitis** (**JE**) virus adapted to **Vero** cells by passages on **Vero** cells, is new.

ACTIVITY - Immunostimulant.

The immunogenicity of JE **CJ50003** purified, inactivated virus (PIV) was tested in 6-week old Balb/c mice. The mice were **immunized** subcutaneously with 500, 50 or 5 ng of PIV either in saline or saline with aluminum hydroxide. Mice received two inoculations spaced 3 weeks apart. Sera from each group were tested at 3 weeks after the second **immunization**, and tested for the presence of neutralizing antibodies with mouse brain passaged Nakayana strain as neutralized virus. PIV produced neutralizing antibody titers of 1:160 (at 500 ng), 1:40 (at 50 ng) and 1:20 (at 5 ng). PIV was better than Biken **vaccine** at all doses.

MECHANISM OF ACTION - None given.

USE - The **Japanese encephalitis** virus is useful for production of **Japanese encephalitis vaccines**.

ADVANTAGE - The **Japanese encephalitis** virus is produced in a standard cell substrate, thus improving its acceptability in many countries. The multiple harvesting process is responsible for the reduced degree of cytopathic effect of infected cells.

Dwg.0/4

L8 ANSWER 8 OF 42 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1999-543329 [46] WPIDS

DOC. NO. CPI: C1999-158762

TITLE: Albumin-free medium for propagating and multiplying viruses in cultured cells, especially for **vaccine** production.

DERWENT CLASS: B04 D16

INVENTOR(S): HEIMINDINGER, P

PATENT ASSIGNEE(S): (INMR) PASTEUR MERIEUX SERUMS & VACCINS SA; (MERI-N) MERIAL SAS

COUNTRY COUNT: 84

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
FR 2775983	A1	19990917	(199946)*		12
WO 9947648	A2	19990923	(199947)	FR	

Searcher : Shears 308-4994

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC
MW NL OA PT SD SE SL SZ UG ZW
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES
FI GB GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI
SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9927352 A 19991011 (200008)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
FR 2775983	A1	FR 1998-3333	19980313
WO 9947648	A2	WO 1999-FR578	19990315
AU 9927352	A	AU 1999-27352	19990315

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9927352	A	Based on	WO 9947648

PRIORITY APPLN. INFO: FR 1998-3333 19980313
AN 1999-543329 [46] WPIDS
AB FR 2775983 A UPAB: 19991122
NOVELTY - Medium for propagating and multiplying viruses in cultured cells is free of human, animal or recombinant albumin and contains mitogenic potato or cucumber proteins or glycoproteins with molecular weights of 10-200 kD.
ACTIVITY - None given.
MECHANISM OF ACTION - None given.
USE - For **vaccine** production, preferably by propagating and multiplying **Japanese encephalitis**, rabies, poliomyelitis, hepatitis A, influenza, Dengue fever, measles, mumps, chickenpox or rubella virus in **Vero** cell cultures, especially for producing a human **vaccine** against **Japanese encephalitis**.
ADVANTAGE - The medium avoids the disease transmission risks associated with albumin-containing media while still provided industrially acceptable virus yields.
Dwg.0/0

L8 ANSWER 9 OF 42 TOXLIT
ACCESSION NUMBER: 1999:6566 TOXLIT
DOCUMENT NUMBER: CA-130-213608U
TITLE: An attenuated **Japanese encephalitis** virus adapted to **Vero** cell and a **Japanese encephalitis** **vaccine**.

AUTHOR: Kim HS; Yoo WD; Kim SO; Lee SH; Moon SB; Hong SP; Shin YC; Chung YJ; Eckels KH; et al.
SOURCE: (1999). PCT Int. Appl. PATENT NO. 9911762 03/11/1999 (Walter Reed Army Institute of Research). CODEN: PIXXD2.
PUB. COUNTRY: KOREA, REPUBLIC OF
DOCUMENT TYPE: Patent
FILE SEGMENT: CA
LANGUAGE: English
OTHER SOURCE: CA 130:213608
ENTRY MONTH: 199904
AB SThe present invention relates to an attenuated **Japanese encephalitis** virus adapted to **Vero** cell by passages on **Vero** cell and a **Japanese encephalitis vaccine** comprising said attenuated virus. **Japanese encephalitis** virus adapted to **Vero** cell after 4 passage was used for prepn. of a **vaccine**. The titer of neutralizing antibodies (the reciprocal of serum diln. resulting in 50% redn. of mouse brain passaged Nakayama virus plaques) for both purified, inactivated virus (PIV) and live, attenuated virus in mice at a dose of 5 .mu.g was 1:320. Mice were **immunized** with 2 inoculations of test **vaccines** (comprising PIV) spaced 3 wk apart, then challenged with 500 pfu of mouse-neurovirulent Nakayama virus. Mice **immunized** with 500 ng of PIV or 50 ng PIV and alum showed 100% protection.

L8 ANSWER 10 OF 42 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 1999231936 MEDLINE
DOCUMENT NUMBER: 99231936
TITLE: Recombinant, chimaeric live, attenuated **vaccine** (ChimeriVax) incorporating the envelope genes of **Japanese encephalitis** (SA14-14-2) virus and the capsid and nonstructural genes of yellow fever (17D) virus is safe, immunogenic and protective in non-human primates.
AUTHOR: Monath T P; Soike K; Levenbook I; Zhang Z X; Arroyo J; Delagrave S; Myers G; Barrett A D; Shope R E; Ratterree M; Chambers T J; Guirakhoo F
CORPORATE SOURCE: OraVax Inc., Cambridge, MA 02139, USA.. tmonath@oravax.com
SOURCE: VACCINE, (1999 Apr 9) 17 (15-16) 1869-82. Journal code: X60. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199909

ENTRY WEEK: 19990902

AB Yellow fever 17D virus, a safe and effective live, attenuated **vaccine**, was used as a vector for genes encoding the protective antigenic determinants of a heterologous member of the genus Flavivirus, **Japanese encephalitis** (**JE**) virus, the leading cause of acute viral central nervous system infection and death throughout Asia. The viral envelope (prM and E) genes of a full-length cDNA clone of YF 17D virus were replaced with the corresponding genes of **JE** SA14-14-2, a strain licensed as a live, attenuated **vaccine** in China. Full-length RNA transcripts of the YF/**JE** chimaera were used to transfect **Vero** cells. The progeny virus (named 'ChimeriVax-**JE**'), was used to define safety after intracerebral (i.c.) inoculation of rhesus monkeys. Monkeys (N = 3) inoculated with a high dose (6.6 log10 pfu) developed a brief viremia, showed no signs of illness, developed high titers of anti-**JE** neutralizing antibody, and had minimal brain and spinal cord lesion scores according to criteria specified in the WHO monkey neurovirulence test. A control group of 3 monkeys that received a lower dose (4.2 log10 pfu) of commercial YF 17D **vaccine** had slightly higher lesion scores. To develop a lethal monkey model of **JE** for **vaccine** protection tests, we inoculated groups of monkeys i.c. or intranasally (i.n.) with a **JE** virus strain found to be highly neurovirulent and neuroinvasive for mice. Monkeys inoculated i.c., but not i.n., developed severe **encephalitis** after an incubation period of 8-13 days. The ChimeriVax-**JE** virus was passed in a cell line acceptable for human use (diploid fetal rhesus lung) and 4.3 or 5.3 log10 pfu were inoculated into groups of 3 monkeys by the subcutaneous route. All 6 animals developed brief viremias (peak titer < 2.0 log10 pfu/ml) and subsequently had anti-**JE** but no yellow fever neutralizing antibodies. On day 64, the monkeys were challenged i.c. with 5.5 log10 pfu of virulent **JE** virus. The **immunized** animals had no detectable viremia post-challenge, whereas 4 unimmunized controls became viremic. Only 1 of 6 (17%) **vaccinated** monkeys but 4 of 4 (100%) unvaccinated controls developed **encephalitis**. Histopathological examination 30 days after challenge confirmed that the protected, **immunized** animals had no or minimal evidence of **encephalitis**. These data demonstrated the ability of the ChimeriVax-**JE** to induce a rapid humoral immune response and to protect against a very severe, direct intracerebral virus challenge. Target areas of neuronal damage and inflammation in monkeys infected IC with wild-type **JE**, the chimaeric virus and YF 17D were similar, indicating that the histopathological scoring system used for the WHO yellow fever monkey neurovirulence test will be applicable to control testing of chimaeric seed viruses and **vaccines**.

L8 ANSWER 11 OF 42 MEDLINE
ACCESSION NUMBER: 1999263164 MEDLINE
DOCUMENT NUMBER: 99263164
TITLE: Immunogenicity, genetic stability, and protective efficacy of a recombinant, chimeric yellow fever-**Japanese encephalitis** virus (ChimeriVax-**JE**) as a live, attenuated **vaccine** candidate against **Japanese encephalitis**.
AUTHOR: Guirakhoo F; Zhang Z X; Chambers T J; Delagrave S; Arroyo J; Barrett A D; Monath T P
CORPORATE SOURCE: OraVax, Inc., 38 Sidney Street, Cambridge, Massachusetts 02139, USA.. fguirakh@oravax.com
CONTRACT NUMBER: AI36798-03 (NIAID)
SOURCE: VIROLOGY, (1999 May 10) 257 (2) 363-72. Journal code: XEA. ISSN: 0042-6822.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199908
ENTRY WEEK: 19990803
AB Yellow fever (YF) 17D **vaccine** virus, having a 60-year history of safe and effective use, is an ideal vector to deliver heterologous genes from other medically important flaviviruses. A chimeric YF/**Japanese encephalitis** (**JE**) virus (ChimeriVax-**JE** virus) was constructed by insertion of the premembrane and envelope (prME) genes of an attenuated human **vaccine** strain (SA14-14-2) of **Japanese encephalitis** (**JE**) virus between core and nonstructural (NS) genes of a YF 17D infectious clone. The virus grew to high titers in cell cultures and was not neurovirulent for 3- to 4-week-old mice at doses </=6 log10 plaque forming units (pfu) inoculated by the intracerebral (IC) route. In contrast, commercial YF 17D **vaccine** was highly neurovirulent for weanling mice by the same route. Mice inoculated subcutaneously with one dose of >/=10(3) pfu of ChimeriVax-**JE** virus were solidly protected against intraperitoneal challenge with a virulent **JE** virus. Genetic stability of the chimera was assessed by sequential passages in cell cultures or in mouse brain. All attenuating residues and the avirulent phenotype were preserved after 18 passages in cell cultures or 6 passages in mouse brains. Copyright 1999 Academic Press.

L8 ANSWER 12 OF 42 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 1999282891 EMBASE
TITLE: **Japanese encephalitis** **vaccine** (inactivated, BIKEN) in U.S. Soldiers: Immunogenicity and safety of

vaccine administered in two dosing regimens.

AUTHOR: Defraites R.E.; Gambel J.M.; Hoke C.H. Jr.; Sanchez J.L.; Withers B.G.; Karabatsos N.; Shope R.E.; Tirrell S.; Yoshida I.; Takagi M.; Meschievitz C.K.; Tsai T.F.

CORPORATE SOURCE: R.E. Defraites, U.S. Army Ctr. for Health.Promotion, 5158 Blackhawk Road, Aberdeen Proving Ground, MD 21010, United States

SOURCE: American Journal of Tropical Medicine and Hygiene, (1999) 61/2 (288-293).
Refs: 21
ISSN: 0002-9637 CODEN: AJTHAB

COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
026 Immunology, Serology and Transplantation
037 Drug Literature Index
038 Adverse Reactions Titles
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The safety and immunogenicity of **Japanese encephalitis** (**JE**) **vaccine** (Nakayama strain, monovalent/BIKEN) was studied in 538 U.S. soldiers in 1990. Three doses of **vaccine** from three consecutively manufactured lots were given on days 0, 7, and either 14 or 30. Serum for antibody determination was drawn at months 0, 2, and 6. **Japanese encephalitis** plaque reduction neutralization tests were performed by three laboratories on each specimen. Five hundred twenty-eight (98%) participants completed the **immunization** series. All recipients without antibody before **immunization** developed neutralizing antibody against **JE** virus. There were no differences in geometric mean titer among the three test lots at months 2 and 6. Soldiers who received the third dose on day 30 had higher titers at both time points. Antibody to yellow fever had no significant effect on immune response to **vaccine**. Conclusions drawn from analysis of serologic data from the three labs were nearly identical. Symptoms were generally limited to mild local effects and were reduced in frequency with each subsequent does in the series (21% to 11%; P < 0.0001). Generalized symptoms were rare (e.g., fever = 5%) with no reported cases of anaphylaxis.

L8 ANSWER 13 OF 42 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 1999429344 MEDLINE
DOCUMENT NUMBER: 99429344
TITLE: **Immunization** with plasmid DNA encoding the envelope glycoprotein of **Japanese Encephalitis** virus confers significant protection against intracerebral viral challenge

without inducing detectable antiviral antibodies.

AUTHOR: Ashok M S; Rangarajan P N

CORPORATE SOURCE: Department of Biochemistry, Indian Institute of Science, Bangalore.

SOURCE: VACCINE, (1999 Aug 20) 18 (1-2) 68-75.
Journal code: X60. ISSN: 0264-410X.

PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200001

ENTRY WEEK: 20000104

AB A plasmid DNA construct, pCMXENV encoding the envelope (E) glycoprotein of **Japanese Encephalitis** virus (**JEV**), was constructed. This plasmid expresses the E protein intracellularly, when transfected into **Vero** cells in culture. The ability of pCMXENV to protect mice from lethal **JEV** infection was evaluated using an intracerebral (i.c.) **JEV** challenge model. Several independent **immunization** and **JEV** challenge experiments were carried out and the results indicate that 51 and 59% of the mice are protected from lethal i.c. **JEV** challenge, when **immunized** with pCMXENV via intramuscular (i.m.) and intranasal (i.n.) routes respectively. None of the mice **immunized** with the vector DNA (pCMX) survived in any of these experiments. **JEV**-specific antibodies were not detected in pCMXENV-**immunized** mice either before or after challenge. **JEV**-specific T cells were observed in mice **immunized** with pCMXENV which increased significantly after **JEV** challenge indicating the presence of **vaccination** -induced memory T cells. Enhanced production of interferon-gamma (IFN-gamma) and complete absence of interleukin-4 (IL-4) in splenocytes of pCMXENV-**immunized** mice on restimulation with **JEV** antigens in vitro indicated that the protection is likely to be mediated by T helper (Th) lymphocytes of the Th1 sub-type. In conclusion, our results demonstrate that **immunization** with a plasmid DNA expressing an intracellular form of **JEV** E protein confers significant protection against i.c. **JEV** challenge even in the absence of detectable antiviral antibodies.

L8 ANSWER 14 OF 42 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 3

ACCESSION NUMBER: 1999:43363 BIOSIS

DOCUMENT NUMBER: PREV199900043363

TITLE: Comparisons of microcarrier cell culture processes in one hundred mini-liter spinner flask and fifteen-liter bioreactor cultures.

AUTHOR(S): Wu, Suh-Chin (1); Hsieh, Wen-Chin; Liau, Ming-Yi

CORPORATE SOURCE: (1) Dep. Life Sci., Natl. Tsing Hua Univ., Hsinchu

Taiwan
SOURCE: Bioprocess Engineering, (Dec., 1998) Vol. 19, No. 6, pp. 431-434.
ISSN: 0178-515X.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Microcarrier cell culture process can be used to culture anchorange-dependent cells in large bioreactor vessels. The process performance in large bioreactors is usually less prominent than that in spinner flask vessels and bench scale reactors. In this study we investigated the microcarrier cell culture processes in 100 ml spinner flask and 15-liter bioreactor cultures, including the kinetics for cell attachment, cell growth and the production of **Japanese encephalitis vaccine** strain (Beijing-1) virus. Under a fixed concentration of microcarrier and cell density used in inoculations, the attachment kinetics of **Vero** cells on Cytodex 1 microcarrier in a 15-liter bioreactor vessel was 2 folds slower than with 100 ml spinner flask culture. Virus replication in 15-liter bioreactor culture also revealed an approximately one day lag-time compared to 100 ml spinner flask culture. Findings presented herein provide valuable information for designing and operating microcarrier cell culture processes in large bioreactor vessels.

L8 ANSWER 15 OF 42 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1998:261769 BIOSIS
DOCUMENT NUMBER: PREV199800261769
TITLE: Neutralizing mechanism of a monoclonal antibody against **Japanese encephalitis** virus glycoprotein E.
AUTHOR(S): Butrapet, Siritorn; Kimura-Kuroda, Junko; Zhou, De-Shan; Yasui, Kotaro
CORPORATE SOURCE: Dep. Microbiol. Immunol., Tokyo Metropolitan Inst. Neurosci., Fuchu-City, Tokyo Japan
SOURCE: American Journal of Tropical Medicine and Hygiene, (April, 1998) Vol. 58, No. 4, pp. 389-398.
ISSN: 0002-9637.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The neutralization of **Japanese encephalitis** virus (**JEV**) was studied using **JEV**-specific neutralizing (NT) monoclonal antibody (MAb) 503 that recognizes the envelope glycoprotein. Analysis using radiolabeled **JEV** and observations by confocal laser microscopy and electron microscopy indicated that the NT and protection activities of MAb 503 did not result from the prevention of the first step of **JEV** infection, binding of virus to the cell surface. Treatment with MAb 503 strongly inhibited **JEV**-induced cell fusion and internalization of **JEV** into the cells, and resulted in

enhanced release of **JEV**-RNA from the cells. These observations suggested that the NT activity of MAb 503 is involved in the later steps of **JEV** infection.

L8 ANSWER 16 OF 42 JICST-EPlus COPYRIGHT 2000 JST
ACCESSION NUMBER: 990184387 JICST-EPlus
TITLE: Development of an inactivated **Japanese encephalitis vaccine** by utilizing a continuous cell line.
AUTHOR: ISHIKAWA TOYOKAZU; YOSHII HIRONORI; ONISHI TOSHIYUKI; ISHIBASHI MASAHIDE; IMAGAWA TADASHI
CORPORATE SOURCE: Res. Found. for Microb. Dis. of Osaka Univ.
SOURCE: Rinsho to Uirusu (Clinical Virology), (1998) vol. 26, no. 5, pp. 340-350. Journal Code: Z0316B ISSN: 0303-8092
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New

L8 ANSWER 17 OF 42 MEDLINE
ACCESSION NUMBER: 1998206488 MEDLINE
DOCUMENT NUMBER: 98206488
TITLE: **Japanese encephalitis** among hospitalized pediatric and adult patients with acute encephalitis syndrome in Hanoi, Vietnam 1995.
AUTHOR: Lowry P W; Truong D H; Hinh L D; Ladinsky J L; Karabatsos N; Cropp C B; Martin D; Gubler D J
CORPORATE SOURCE: Division of Epidemiology, School of Public Health, University of Minnesota, Minneapolis, USA.
SOURCE: AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE, (1998 Mar) 58 (3) 324-9. Journal code: 3ZQ. ISSN: 0002-9637.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199806
ENTRY WEEK: 19980603
AB The etiologic spectrum of acute **encephalitis** syndrome (AES) has not been well defined in Vietnam. Cohort and case-control studies were performed on all adult and pediatric AES patients admitted to the Neurology Service of Bach Mai Hospital between June 5 and August 3, 1995. Among pediatric AES patients, 31 (67%) of 46 had acute **Japanese encephalitis** (**JE**), compared with only two (6%) of 33 adult AES patients ($P < 0.0001$). For confirmed **JE** cases, serum specimens obtained 15-21 days after symptom onset had the highest mean anti-**JE** IgM signal-to-noise (P/N) ratios (8.08 + 1.09 SE). A serosurvey of adult

household members did not reveal any cases of recent subclinical **JE** infection, although 26% had evidence of past **JE** infection. The use of bed netting was nearly universal but did not appear to reduce the risk of AES or **JE**. Given the high incidence of **JE**, particularly among children, Vietnam seems well suited for the development of a targeted **JE** **vaccination** strategy.

L8 ANSWER 18 OF 42 MEDLINE
ACCESSION NUMBER: 1998079002 MEDLINE
DOCUMENT NUMBER: 98079002
TITLE: Immunogenicity of live attenuated SA14-14-2 **Japanese encephalitis** **vaccine**--a comparison of 1- and 3-month **immunization** schedules.
AUTHOR: Tsai T F; Yu Y X; Jia L L; Putvatana R; Zhang R; Wang S; Halstead S B
CORPORATE SOURCE: Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Ft. Collins, Colorado, USA.
SOURCE: JOURNAL OF INFECTIOUS DISEASES, (1998 Jan) 177 (1) 221-3.
Journal code: IH3. ISSN: 0022-1899.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199803
ENTRY WEEK: 19980305
AB Live attenuated SA14-14-2 **Japanese encephalitis** (**JE**) **vaccine** has been safe and effective in >100 million **immunized** children, but its current administration schedule of two doses given a year apart does not lend itself to inclusion in established Expanded Program of **Immunization** (EPI) schedules of childhood **immunization**. Immune responses to **immunization** at shorter intervals were compared in middle-school-aged children **immunized** with two doses separated by 1 month (n = 116) or 2.5 months (n = 115). Two **vaccine** lots were compared. Seroconversion to the **vaccine** was observed in 100% of **vaccinees** **immunized** in the 1-month schedule and in 94% (lot 2) and 100% (lot 1) of **vaccinees** **immunized** in the 2.5-month schedule. Geometric mean titers were almost 2-fold higher with the longer schedule. The routine administration of **JE** SA14-14-2 **vaccine** to infants in an EPI schedule should be possible using either interval.

L8 ANSWER 19 OF 42 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 4
Searcher : Shears 308-4994

ACCESSION NUMBER: 1999:74172 BIOSIS
DOCUMENT NUMBER: PREV199900074172
TITLE: Large-scale purification of inactivated **Japanese encephalitis** **vaccine** from **vero** cells by zonal centrifugation.
AUTHOR(S): Shi, Huiying; Ding, Zhifen; Zhao, Min; et al.
CORPORATE SOURCE: Natl. Vaccine and Serum Inst., Beijing 100024 China
SOURCE: Virologica Sinica, (Sept., 1998) Vol. 13, No. 3, pp. 208-213.
ISSN: 1003-5125.
DOCUMENT TYPE: Article
LANGUAGE: Chinese
SUMMARY LANGUAGE: Chinese; English
AB **Japanese Encephalitis** (**JE**) **Vaccine** in **Vero** cell can be easily purified by zonal centrifugation at non-continuous sucrose gradients (36% and 60%), 32 600 g for 4 h. The calf serum protein and other nonviral proteins in the **vaccine** were almost separated from the **JE** virus. The residual calf serum protein was less than 0.5 mug/mL, and the total protein was less than 30 mug/mL. The residual **Vero** cell DNA in the **vaccine** was less than 100 pg/0.5 mL. The titer of purified **Japanese** **Encephalitis** **vaccine** is six times higher than China control **vaccine**. This method is recommended as an available method to purify **JE** **vaccine** from **Vero** cell in large-scale because it is simple, rapid and inexpensive.

L8 ANSWER 20 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 1998:783801 SCISEARCH
THE GENUINE ARTICLE: 126QE
TITLE: Characterization of an attenuated **Japanese** **encephalitis** virus adapted to African green monkey kidney cells, **Vero**
AUTHOR: Chung Y J (Reprint); Hong S P; Moon S B; Shin Y C; Kim S O
CORPORATE SOURCE: CHEILJEDANG CORP, R&D CTR, INCHON 467810, SOUTH KOREA
COUNTRY OF AUTHOR: SOUTH KOREA
SOURCE: JOURNAL OF MICROBIOLOGY, (SEP 1998) Vol. 36, No. 3, pp. 189-195.
Publisher: MICROBIOLOGY SOC KOREA, KOREA SCIENCE & TECHNOLOGY CENTER 803, 635-4 YEOGSAM-DONG, KANGNAM-KU, SEOUL 135-703, SOUTH KOREA.
ISSN: 1225-8873.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 20

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Live attenuated **Japanese encephalitis** (**JE**) virus SA14-14-2 produced in primary dog kidney cells (PDR) was adapted to African green monkey kidney cells, **Vero** . In an effort to gain insight into the molecular basis of the biological characteristics of the isolated SA14-14-2 (**Vero**) strain, the 1,500 nucleotide sequence encoding the envelope (E) gene which possesses major neutralizing epitopes was determined and compared with the sequences of two other attenuated **JE** virus strains, SA14-14-2 (PHK) and SA14-14-2 (PDK). The amino acid sequence of the C-terminal region (a.a. 280-500) of the SA14-14-2 (**Vero**) E gene was found to be identical to those of strains SA14-14-2 (PHK) and SA14-14-2 (PDK), while the N-terminal region (a.a. 1-279) showed sequence variation. The distribution of mutations in the N-terminal region was nearly the same among the three attenuated strains, suggesting that the N-terminal sequences might be related with virus-host cell specificity. However, it was found that Lys and Val (a.a.138 and 176, respectively), known to be responsible for attenuation, are still conserved in SA14-14-2 (**Vero**). Animal testing showed that SA14-14-2 (**Vero**) has a neurovirulence phenotype similar tp that of the parent SA14-14-2 (PDK) strain in suckling mice. The SA14-14-2 (**Vero**) grew very efficiently in **Vero** cells enough to support **vaccine** production. The growth characteristics of SA14-14-2 (**Vero**) in **Vero** cell and conservation of attenuation determinant of neurovirulence support that SA14-14-2 (**Vero**) could be developed as a new **vaccine** strain for human use.

L8 ANSWER 21 OF 42 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 1998376359 MEDLINE
DOCUMENT NUMBER: 98376359
TITLE: Antigenic characterization of nine wild-type Taiwanese isolates of **Japanese encephalitis** virus as compared with two **vaccine** strains.
AUTHOR: Wu S C; Lian W C; Hsu L C; Wu Y C; Liau M Y
CORPORATE SOURCE: Department of Life Science, National Tsing Hua University, Hsinchu, Taiwan.. scwu@life.nthu.edu.tw
SOURCE: VIRUS RESEARCH, (1998 May) 55 (1) 83-91. Journal code: X98. ISSN: 0168-1702.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF030549; GENBANK-AF030550
ENTRY MONTH: 199812
AB The antigenic properties of nine wild-type **Japanese encephalitis** viruses isolated in Taiwan during 1990 1994

were investigated by comparison with two inactivated **vaccine** strains (Beijing-1, Nakayama-NIH). All of the nine Taiwanese isolates were found to induce higher cytopathology in **Vero** cells but showed similar mouse virulence as the two **vaccine** strains. Antigenic characterization using six E protein-specific monoclonal antibodies shows two of the nine wild-type isolates (i.e. CH1949 and CH2195) presented different antigenic properties of hemagglutination inhibition and plaque reduction neutralization. The E-protein gene nucleotide sequences of CH1949 and CH2195 were determined and compared with other published sequences of the two **vaccine** strains and other 19 Asian/Taiwanese isolates. Phylogenetic tree analysis indicates these two wild-type Taiwanese isolates are more distant from the two **vaccine** strains.

L8 ANSWER 22 OF 42 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 1998156785 MEDLINE
DOCUMENT NUMBER: 98156785
TITLE: Inhibitory effect of furanonaphthoquinone derivatives on the replication of **Japanese encephalitis** virus.
AUTHOR: Takegami T; Simamura E; Hirai K; Koyama J
CORPORATE SOURCE: Medical Research Institute Kanazawa Medical University, Uchinada, Ishikawa, Japan.
SOURCE: ANTIVIRAL RESEARCH, (1998 Jan) 37 (1) 37-45. Journal code: 6I7. ISSN: 0166-3542.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY WEEK: 19980603
AB **Japanese encephalitis** still occurs in endemic and epidemic forms over a wide area of Asia. Although the **vaccine** against **Japanese encephalitis** virus (**JEV**) is widely used, no antiviral drug has been reported. We used several different kinds of furanonaphthoquinone derivatives and found antiviral activity against **JEV**. Especially, 2-methylnaphtho[2,3-b]furan-4,9-dione (FNQ3) indicated the highest antiviral activity, followed by 2-(1-hydroxyethyl)-, 5(or 8)-hydroxy-, and 2-methyl-5(or 8)-hydroxy-analogs of naphtho[2,3-b]furan-4,9-dione. In the presence of 3 microg/ml FNQ3, the virus yields in **Vero** cells were 2 x 10(5) PFU/ml at 24 h after infecting with the virus and 10% of the control level. Western blot analysis using anti-E rabbit sera or anti-NS3 showed that the expression of viral proteins was inhibited by treatment with FNQ3. In addition, Northern blot analysis indicated that the appearance of **JEV**-RNA was also inhibited by FNQ3. These results suggest that FNQ3 inhibits **JEV** replication through viral RNA and protein synthesis.

L8 ANSWER 23 OF 42 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 1998122988 MEDLINE
DOCUMENT NUMBER: 98122988
TITLE: Attenuation of **Japanese encephalitis** virus by selection of its mouse brain membrane receptor preparation escape variants.
AUTHOR: Ni H; Barrett A D
CORPORATE SOURCE: Department of Pathology and Center for Tropical Diseases, University of Texas Medical Branch, Galveston, Texas, 77555-0609, USA.
SOURCE: VIROLOGY, (1998 Feb 1) 241 (1) 30-6.
Journal code: XEA. ISSN: 0042-6822.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
OTHER SOURCE: GENBANK-AF036914; GENBANK-AF036915; GENBANK-AF036916; GENBANK-AF036917; GENBANK-AF036918; GENBANK-AF036919
ENTRY MONTH: 199804
ENTRY WEEK: 19980404
AB Six variants of **Japanese encephalitis** (**JE**) virus strain P3 were selected for resistance to binding to mouse brain membrane receptor preparations (MRP). All but one of these MRP escape (MRPR) variants were significantly attenuated in mice for both neuroinvasiveness (>200-fold) and neurovirulence (>500-fold) compared to their parent virus. Attenuated mouse brain MRPR variants could be detected in the sera of mice following either intracerebral (i.c.) or intraperitoneal inoculation, whereas virus was detected only in brains of mice following ic inoculation. **Immunization** of mice with MRPRs induced neutralizing antibodies and protected mice against challenge with wild-type **JE** virus. A common amino acid mutation was found in the envelope (E) protein gene of all attenuated mouse brain MRPR variants at residue E-306 compared to P3 virus grown in mosquito C6-36 cells or plaque purified and amplified in monkey kidney **Vero** cells. This amino acid is putatively responsible for attenuation due to alteration in binding of **JE** virus to its cell receptor in mouse brain. The methodology developed in this study has general applicability to the attenuation of virulence of viruses and to the identification of agents that will block amino acids in a viral attachment protein(s) that interacts with cell receptors. Copyright 1998 Academic Press.

L8 ANSWER 24 OF 42 JICST-EPlus COPYRIGHT 2000 JST
ACCESSION NUMBER: 990722942 JICST-EPlus
TITLE: The development of inactivated **Japanese encephalitis vaccine** by the subculture cell. (Ministry of Health and Welfare S).

Searcher : Shears 308-4994

AUTHOR: ISHIKAWA TOYOKAZU; YOSHII HIRONORI; ONISHI TOSHIYUKI; IMAGAWA TADASHI; TAKAMIZAWA AKIHISA
CORPORATE SOURCE: Kanoji Inst., Res. Found. for Microb. Dis. of Osaka Univ.
SOURCE: Fukatsuka Wakuchin no Kairyo ni kansuru Kenkyu. Heisei 9 Nendo Kenkyu Hokokusho, (1998) pp. 15-17. Journal Code: N19991786 (Ref. 3)
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New

L8 ANSWER 25 OF 42 JICST-EPlus COPYRIGHT 2000 JST
ACCESSION NUMBER: 990722939 JICST-EPlus
TITLE: The problem on the quality control of **Japanese encephalitis vaccine**. (Ministry of Health and Welfare S).
AUTHOR: TASHIRO MASATO
CORPORATE SOURCE: National Inst. Infectious Diseases, JPN
SOURCE: Fukatsuka Wakuchin no Kairyo ni kansuru Kenkyu. Heisei 9 Nendo Kenkyu Hokokusho, (1998) pp. 9-10. Journal Code: N19991786
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New

L8 ANSWER 26 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 96:893575 SCISEARCH
THE GENUINE ARTICLE: VV272
TITLE: Development of a purified, inactivated, dengue-2 virus **vaccine** prototype in **vero** cells: Immunogenicity and protection in mice and rhesus monkeys
AUTHOR: Putnak R; Barvir D A; Burrous J M; Dubois D R; DAndrea V M; Hoke C H; Sadoff J C; Eckels K H (Reprint)
CORPORATE SOURCE: WALTER REED ARMY MED CTR, WALTER REED ARMY INST RES, DEPT BIOL RES, WASHINGTON, DC 20307 (Reprint); WALTER REED ARMY MED CTR, WALTER REED ARMY INST RES, DEPT BIOL RES, WASHINGTON, DC 20307; US FDA, DIV CLIN LAB DEVICES, ROCKVILLE, MD 20857; MERCK RES LABS, BLUE BELL, PA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF INFECTIOUS DISEASES, (DEC 1996) Vol. 174, No. 6, pp. 1176-1184. Publisher: UNIV CHICAGO PRESS, 5720 S WOODLAWN AVE, CHICAGO, IL 60637. ISSN: 0022-1899.

DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 49

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The feasibility of a purified, inactivated dengue (DEN) **vaccine** made in **Vero** cells was explored, A DEN-2 virus candidate was chosen for production of a monotypic, purified, inactivated **vaccine** (PIV), Virus was harvested from roller bottle culture supernatants, concentrated, and purified on sucrose gradients. The purified virus was inactivated with 0.05% formalin at 22 degrees C. After inactivation, the virus retained its antigenicity and was immunogenic in mice and rhesus monkeys, in which it elicited high titers of DEN-2 virus-neutralizing antibody. Mice were completely protected against challenge with live, virulent virus after receiving two 0.15-mu g doses of PIV. Monkeys **vaccinated** with three doses ranging as low as 0.25 mu g demonstrated complete absence or a significant reduction in the number of days of viremia after challenge with homologous virus. These results warrant further testing and development of PIVs for other DEN virus serotypes.

L8 ANSWER 27 OF 42 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-388695 [50] WPIDS
DOC. NO. CPI: C1995-166906
TITLE: **Japanese encephalitis** virus antigenic E protein - produced in mammalian cells, useful as a **vaccine** or for diagnosis of **Japanese encephalitis** virus.
DERWENT CLASS: B04 D16
PATENT ASSIGNEE(S): (TOKT-N) TOKYO TO SHINKEI KAGAKU SOGO KENKYUSHO; (KAGA) ZH KAGAKU & KESSEI RYOHO KENKYUSHO
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 07265093	A	19951017	(199550)*	EN	15

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 07265093	A	JP 1994-85911	19940330

PRIORITY APPLN. INFO: JP 1994-85911 19940330
AN 1995-388695 [50] WPIDS
AB JP 07265093 A UPAB: 19951215

A novel process for producing an antigenic protein on the surface of **Japanese encephalitis** virus, comprises introducing into mammalian cells, pref. CHO, COS or **Vero** cells, an expression vector having the whole or a part of cDNA coding for an antigenic protein (E protein) on the surface of **Japanese encephalitis** virus, then culturing the mammalian cells and recovering the expressed antigenic protein.

USE - The antigenic protein (E protein) is used as a **vaccine** or for an immunological preventive agent or diagnostic agent particularly for use in ELISA, hemagglutination test, hemagglutination inhibition test and complement fixation test, as well as in a variety tests with an antigen or antibody labelled with fluorescent pigment, enzyme, radioactive isotope, etc., to analyze **Japanese encephalitis** virus with similar antigenicity of the genus flavivirus.

ADVANTAGE - Because the antigenic protein is secreted from transformed mammalian host cells into the culture, its purification is easy in the absence contaminations including the recombinant virus, to assure high safety for the antigenic protein as a **vaccine** against **Japanese encephalitis** virus.

Dwg.0/0

L8 ANSWER 28 OF 42 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1996:285430 BIOSIS
DOCUMENT NUMBER: PREV199699007786
TITLE: The study of adaptation of **Japanese encephalitis** virus in **Vero** cells.
AUTHOR(S): Shi Huiying, Ding Zhifen; Chang Zhenyan
CORPORATE SOURCE: Natl. Vaccine and Serum Inst., Beijing 100024 China
SOURCE: Virologica Sinica, (1995) Vol. 10, No. 4, pp. 273-277.
ISSN: 1000-3223.
DOCUMENT TYPE: Article
LANGUAGE: Chinese
SUMMARY LANGUAGE: Chinese; English
AB P-3 strain of **Japanese Encephalitis** (**JE**) virus was adapted in **Vero** cells for 27 passages. No significant changes were found on virus titre and CPE after adaptation, but the immunogenicity was getting weaker after 10 passages. The immunogenicity weakened could be recovered partially by repassaging the **Vero**-cells adapted virus in mouse brain. Less than 10 passages of adapted virus growing in **Vero** cells could be used as seed virus for production of **JE vaccine** instead of virus prepared from mouse brain. Using the adapted virus for **vaccine** production could be easier to avoid the contamination of extraneous agents compared with using the virus from mouse brain.

L8 ANSWER 29 OF 42 MEDLINE
ACCESSION NUMBER: 95266302 MEDLINE
DOCUMENT NUMBER: 95266302
TITLE: Sindbis vectors suppress secretion of subviral particles of **Japanese encephalitis** virus from mammalian cells infected with SIN-**JEV** recombinants.
AUTHOR: Pugachev K V; Mason P W; Frey T K
CORPORATE SOURCE: Department of Biology, Georgia State University, Atlanta 30303, USA.
SOURCE: VIROLOGY, (1995 May 10) 209 (1) 155-66.
Journal code: XEA. ISSN: 0042-6822.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199508

AB Double-subgenomic Sindbis virus (dsSIN) recombinants that express cassettes encoding prM-E or a C-terminally truncated form of E of **Japanese encephalitis** virus (**JEV**) were constructed. The products were efficiently expressed in both mammalian and mosquito cell lines infected with the dsSIN recombinants. However, suppression of prM-E secretion from mammalian cells infected with dsSIN-prM-E recombinants was observed. This suppression was more pronounced late in infection (< 5% of total product was secreted during an 8-hr chase) than early in infection (15% secretion during a 6-hr chase). In comparison, a **vaccinia** virus-prM-E recombinant (vP829) described previously (E. Konishi et al. (1991) Virology 185, 401-410) was shown to secrete 35-50% of total product during a 6- to 8-hr chase both early and late in infection. In contrast, secretion of prM-E from dsSIN-prM-E-infected mosquito (C6/36) cells was found to be efficient (> 50% during an 8-hr chase). The prM-E secreted from both mammalian and mosquito cells was in the form of subviral particles as determined by velocity gradient centrifugation, sensitivity to nonionic detergent, and analysis of processing of N-linked glycans. The truncated E protein expressed by the dsSIN recombinants was secreted efficiently from both mammalian and mosquito cells. Coinfection experiments with the dsSIN-**JEV** recombinants + wild-type **vaccinia** virus and vP829 + SIN demonstrated that the reduced level of secretion of subviral particles exhibited by the dsSIN-**JEV** recombinants was due to an inhibitory effect of the dsSIN vectors. Furthermore, this inhibitory effect was accounted for by the SIN nonstructural proteins since SIN replicons that express prM-E cassette in place of the SIN structural protein open reading frame exhibited a low level of subviral particle secretion. No self-propagating infectious particles were produced in cells transfected with SIN replicons that encode the **JEV** prM-E cassette. The suppression of subviral particle secretion was

apparently correlated with the inhibition of cell protein synthesis which is mediated in SIN-infected vertebrate cells by expression of the SIN nonstructural proteins.

L8 ANSWER 30 OF 42 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1993-373579 [47] WPIDS
DOC. NO. CPI: C1993-165304
TITLE: Non-infective structure particle prepn., useful as **vaccine** - by infecting preliminarily flavivirus infected cell with cDNA integrated recombinant **vaccinia** virus, and then sepg. non-infective structure particles contg. E-protein of flavivirus.
DERWENT CLASS: B04 D16
PATENT ASSIGNEE(S): (JAPG) NIPPON ZEON KK; (TOKY-N) ZH TOKYOTO SHINKEI KAGAKU SOGO KENKYUSHO
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 05276941	A	19931026	(199347)*		7

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 05276941	A	JP 1992-43682	19920228

PRIORITY APPLN. INFO: JP 1992-43682 19920228
AN 1993-373579 [47] WPIDS
AB JP 05276941 A UPAB: 19940111
To preliminarily Flavivirus infected cell, cDNA integrated recombinant Vacinia virus is infected; next, from the cultured supernatant, noninfective structure particles contg. E protein of Flavivirus is sepd.; the cDNA encodes substantially all the part sof Flavivirus derived prM protein and surface antigen protein.

Pref. (1) preliminarily infecting virus is dengue 2 type virus; (2) the cDNA encodes protein of **Japanese encephalitis** virus; and (3) sedimentation coefft. of the structure particle is below 100S.

USE/ADVANTAGE - Substdantially Flavivirus E protein contg. non-infective structure particle, pref. sedimentation coefft. less than or equal to 100s, more pref. ca. 70S, can be obtd.. It can be used for **vaccine**.

In an example, preliminarily dengue 2-type virus was infected at m.o.i. 2 to **Vero** cell, before 24 hours of **vaccinia** virus infection. To 4 x 10power-6 preinfected

Vero cell, recombinant **vaccinia** virus LAJ6-Se and LAJ6 were infected at m.o.i. 2, followed by culturing for 18 hours. The supernatant was filtered with 0.2 micron pore size filter, and ultracentrifuged at 150,000 Xg, for 2 hours. Obtained ppte. was washed with PBS buffer, suspended in 100 micro l of 10 mM carbonate buffer (pH 9.8), diluted, and coated.
Dwg.0/0

L8 ANSWER 31 OF 42 MEDLINE
ACCESSION NUMBER: 93342861 MEDLINE
DOCUMENT NUMBER: 93342861
TITLE: Immunogenicity of wild-type and **vaccine** strains of **Japanese encephalitis** virus and the effect of haplotype restriction on murine immune responses.
AUTHOR: Wills M R; Singh B K; Debnath N C; Barrett A D
CORPORATE SOURCE: Molecular Microbiology Group, School of Biological Sciences, University of Surrey, Guildford, UK..
SOURCE: VACCINE, (1993) 11 (7) 761-6.
Journal code: X6O. ISSN: 0264-410X.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199311

AB The Chinese live attenuated **Japanese encephalitis** (**JE**) virus **vaccine** clone SA14-14-2 produced in primary hamster kidney (PHK) cells has been adapted to primary dog kidney cells (PDK) for use as a live attenuated human **vaccine**. In this study we have compared the immunogenicity in mice of SA14-14-2 (PDK) and SA14-14-2 (PHK); also included was the wild-type parent to the **vaccine** clones, SA14, and another wild-type **JE** virus strain Nakayama (original). It was found that Balb/c (H-2d) mice given a single dose of 10(3) or 10(6) p.f.u. of live SA14-14-2 (PHK) virus elicited a superior neutralizing (N) antibody response as compared to the same dosages of live SA14-14-2 (PDK) virus. However, if the **vaccine** clones were inactivated and administered in a two-dose regime the N antibody response elicited was similar for the two viruses. This observation may be explained by differences in the replication efficiency in vivo of the respective **vaccine** clones. The humoral immune response to all the virus strains in this study elicited by different inbred mouse strains each carrying a discrete haplotype (Balb/c (H-2d), C3H (H-2k), C57BL/6 (H-2b)) were also assessed using haemagglutination inhibition (HAI) and N assays. Viruses were shown to elicit patterns of high and low N-antibody response depending on the major histocompatibility complex (MHC) make-up of the mouse strains. However, the patterns did not necessarily coincide when HAI and N titre reactivity patterns were

compared for the same virus strain.

L8 ANSWER 32 OF 42 MEDLINE
ACCESSION NUMBER: 94257819 MEDLINE
DOCUMENT NUMBER: 94257819
TITLE: A domestic cell bioreactor and its application in virus culture.
AUTHOR: Dong S; Gu X; Chen Y; Yan C; Jiang B; Zhao Y; Chen L; Song J; Chen W
CORPORATE SOURCE: Research Institute of Biochemical Engineering, East China University of Chemical Technology (ECUCT), Shanghai..
SOURCE: CHINESE JOURNAL OF BIOTECHNOLOGY, (1993) 9 (2) 117-21.
Journal code: A5Y. ISSN: 1042-749X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199409
AB A cell culture bioreactor (CellCul-20) and its application in cell and virus culture are described in this paper. It has been evaluated with strict aseptic tests and one-year's operation shown that CellCul-20 bioreactor can keep its aseptic condition after being autoclaved. It can meet the requirement for the control of the main parameters for cell and virus culture and the finely adjustment of the main parameters to meet the changing conditions of the cultivation. A high cell density and a high level of virus titre were reached respectively for **Vero** cells and **Japanese encephalitis** virus (**JEV**) while they were cultured in this bioreactor. It is the first report on large-scale culture of **JEV**-infected **Vero** cells to prepare primary **JEV vaccine**. Some suggestions are made for the improvement of CellCul-20.

L8 ANSWER 33 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 92:699601 SCISEARCH
THE GENUINE ARTICLE: JZ987
TITLE: EXPRESSION AND SECRETION OF **JAPANESE ENCEPHALITIS**-VIRUS NONSTRUCTURAL PROTEIN-NS1 BY INSECT CELLS USING A RECOMBINANT BACULOVIRUS
AUTHOR: FLAMAND M (Reprint); DEUBEL V; GIRARD M
CORPORATE SOURCE: INST PASTEUR, ARBOVIRUS LAB, 25 RUE DR ROUX, F-75724 PARIS 15, FRANCE (Reprint); INST PASTEUR, UNITE VIROL MOLEC, F-75724 PARIS 15, FRANCE
COUNTRY OF AUTHOR: FRANCE
SOURCE: VIROLOGY, (DEC 1992) Vol. 191, No. 2, pp. 826-836.
ISSN: 0042-6822.
DOCUMENT TYPE: Article; Journal

FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 50

L8 ANSWER 34 OF 42 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1992:250840 BIOSIS
DOCUMENT NUMBER: BR42:121140
TITLE: ANTICARBOHYDRATE MONOCLONAL ANTIBODIES INHIBIT FLAVIVIRUSES AND BUNYAVIRUSES MOLECULAR ASPECTS.
AUTHOR(S): BLOUGH H A; KEFAUVER D; HACK D; MONATH T P
CORPORATE SOURCE: NATIONAL NAVAL MED. CENTER, BETHESDA, MD. 20889.
SOURCE: THE FIFTH INTERNATIONAL CONFERENCE ON ANTIVIRAL RESEARCH, VANCOUVER, BRITISH COLUMBIA, CANADA, MARCH 8-13, 1992. ANTIVIRAL RES, (1992) 17 (SUPPL 1), 93. CODEN: ARSRDR. ISSN: 0166-3542.
DOCUMENT TYPE: Conference
FILE SEGMENT: BR; OLD
LANGUAGE: English

L8 ANSWER 35 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 91:335596 SCISEARCH
THE GENUINE ARTICLE: FQ453
TITLE: CHARACTERIZATION OF YELLOW-FEVER VIRUS PROTEINS-E AND NS1 EXPRESSED IN **VERO** AND SPODOPTERA-FRUGIPERDA CELLS
AUTHOR: DESPRES P; GIRARD M; BOULOY M (Reprint)
CORPORATE SOURCE: INST PASTEUR, CNRS, URA 545, UNITE VIROL MOLEC, 25 RUE DR ROUX, F-75724 PARIS, FRANCE
COUNTRY OF AUTHOR: FRANCE
SOURCE: JOURNAL OF GENERAL VIROLOGY, (1991) Vol. 72, No. JUN, pp. 1331-1342.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 54
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The cDNA encoding the E and NS1 proteins of the yellow fever virus (YFV) was expressed in Spodoptera frugiperda cells via the recombinant baculovirus Ac-E.NS1 as a gp100 precursor which was cleaved to generate the recombinant proteins E and NS1 similar in size, folding and antigenicity to the authentic ones. Recombinant protein E exhibited immunodominant epitopes as judged by its reactivity with YFV-neutralizing MAbs. Using the Triton X-114 phase separation system, authentic and recombinant E proteins as well as the gp100 precursor exhibited hydrophobic properties similar to those of integral membrane proteins. Recombinant protein E was found neither in the extracellular medium nor on the cell surface, suggesting that it did not migrate within the secretory pathway of insect cells. Analysis of protein NS1 expressed in primate and

insect cells revealed that the newly synthesized 48K NS1 glycoprotein was converted to a heat-labile gp72 homo-oligomeric form. This phenomenon did not require the presence of carbohydrate groups. Using the Triton X-114 phase separation system, the oligomeric form of NS1 was shown to be associated with cellular membranes although it appeared less hydrophobic than protein E and gp100. A small fraction of YFV NS1 oligomers were transported throughout the secretory pathway to be shed into the extracellular medium of primate cells. YFV NS1 oligomers migrated from the endoplasmic reticulum to the Golgi complex, whereas their N-oligosaccharides of the high-mannose type are processed to the complex-mannose type. Protein NS1 expressed by recombinant baculovirus-infected insect cells was not found in the extracellular medium but associated with the plasma membrane of the cells. Two recombinant NS1 forms were detected in insect cells: a major one with an apparent M(r) of 48K and a minor one of 47K in which N-linked glycans were probably processed to a trimannosyl core without further elongation. Thus, it appears that the transport strategy as well as the N-glycosylation of NS1 in insect cells infected with recombinant baculovirus were different from those of the NS1 in primate cells infected with YFV.

L8 ANSWER 36 OF 42 MEDLINE
ACCESSION NUMBER: 92024099 MEDLINE
DOCUMENT NUMBER: 92024099
TITLE: Comparison of protective immunity elicited by recombinant **vaccinia** viruses that synthesize E or NS1 of **Japanese encephalitis** virus.
AUTHOR: Konishi E; Pincus S; Fonseca B A; Shope R E; Paoletti E; Mason P W
CORPORATE SOURCE: Department of Epidemiology and Public Health, Yale University School of Medicine, New Haven, Connecticut 06510.
CONTRACT NUMBER: AI10987-17 (NIAID)
SOURCE: VIROLOGY, (1991 Nov) 185 (1) 401-10.
Journal code: XEA. ISSN: 0042-6822.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199201
AB **Immunization** with recombinant **vaccinia** viruses that specified the synthesis of **Japanese encephalitis** virus (**JEV**) glycoproteins protected mice from a lethal intraperitoneal challenge with **JEV**. Recombinants which coexpressed the genes for the structural glycoproteins, prM and E, elicited high levels of neutralizing (NEUT) and hemagglutination inhibiting (HAI) antibodies in mice and

protected mice from a lethal challenge by **JEV**.
Recombinants expressing only the gene for the nonstructural glycoprotein, NS1, induced antibodies to NS1 but provided low levels of protection from a similar challenge dose of **JEV**.
Antibodies to the NS3 protein in postchallenge sera, representing the degree of infection with challenge virus, were inversely correlated to NEUT and HAI titers and levels of protection. These results indicate that although **vaccinia** recombinants expressing NS1 can provide some protection from lethal **JEV** infection, recombinants expressing prM and E elicited higher levels of protective immunity.

L8 ANSWER 37 OF 42 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 91:125842 SCISEARCH
THE GENUINE ARTICLE: EZ173
TITLE: PREPARATION OF **JAPANESE ENCEPHALITIS**-VIRUS NONSTRUCTURAL PROTEIN NS1 OBTAINED FROM CULTURE FLUID OF **JEV** -INFECTED **VERO** CELLS
AUTHOR: LEE T; WATANABE K; AIZAWA C; NOMOTO A; HASHIMOTO H (Reprint)
CORPORATE SOURCE: KITASATO INST, DEPT VIROL, SHIROKANE 591, MINATO KU, TOKYO 108, JAPAN; TOKYO METROPOLITAN INST MED SCI, DEPT MICROBIOL, BUNKYO KU, TOKYO 113, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: ARCHIVES OF VIROLOGY, (1991) Vol. 116, No. 1-4, pp. 253-260.
DOCUMENT TYPE: Note; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 22
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The **Japanese encephalitis** virus (**JEV**) nonstructural protein NSI was released efficiently into culture fluid of **JEV**-infected **Vero** cells. The **JEV** NSI protein in the infected culture fluid was found almost as a high-molecular-weight form, probably a dimer form of NSI, and was converted to a monomer by boiling. Large amounts of NSI protein were accumulated in the infected culture fluid. The NSI protein, separated from **JE** virions by centrifugation through sucrose layer, could be obtained in large quantities.

L8 ANSWER 38 OF 42 MEDLINE
ACCESSION NUMBER: 90244392 MEDLINE
DOCUMENT NUMBER: 90244392
TITLE: Induction of protective immunity in animals **vaccinated** with recombinant **vaccinia** viruses that express PreM and E glycoproteins of **Japanese encephalitis** virus.

AUTHOR: Yasuda A; Kimura-Kuroda J; Ogimoto M; Miyamoto M; Sata T; Sato T; Takamura C; Kurata T; Kojima A; Yasui K
CORPORATE SOURCE: Biological Science Laboratory, Nippon Zeon Co. Ltd., Kanagawa, Japan..
SOURCE: JOURNAL OF VIROLOGY, (1990 Jun) 64 (6) 2788-95. Journal code: KCV. ISSN: 0022-538X.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199008

AB A cDNA clone representing the genome of structural proteins of **Japanese encephalitis** virus (**JEV**) was inserted into the thymidine kinase gene of **vaccinia** virus strains LC16mO and WR under the control of a strong early-late promoter for the **vaccinia** virus 7.5-kilodalton polypeptide. Indirect immunofluorescence and fluorescence-activated flow cytometric analysis revealed that the recombinant **vaccinia** viruses expressed **JEV** E protein on the membrane surface, as well as in the cytoplasm, of recombinant-infected cells. In addition, the E protein expressed from the **JEV** recombinants reacted to nine different characteristic monoclonal antibodies, some of which have hemagglutination-inhibiting and **JEV**-neutralizing activities. Radioimmunoprecipitation analysis demonstrated that two major proteins expressed in recombinant-infected cells were processed and glycosylated as the authentic PreM and E glycoproteins of **JEV**. Inoculation of rabbits with the infectious recombinant **vaccinia** virus resulted in rapid production of antiserum specific for the PreM and E glycoproteins of **JEV** . This antiserum had both hemagglutination-inhibiting and virus-neutralizing activities against **JEV**. Furthermore, mice **vaccinated** with the recombinant also produced **JEV**-neutralizing antibodies and were resistant to challenge with **JEV**.

L8 ANSWER 39 OF 42 MEDLINE
ACCESSION NUMBER: 90085816 MEDLINE
DOCUMENT NUMBER: 90085816
TITLE: Characterization of **Japanese encephalitis** virus envelope protein expressed by recombinant baculoviruses.
AUTHOR: Matsuura Y; Miyamoto M; Sato T; Morita C; Yasui K
CORPORATE SOURCE: Department of Veterinary Science, National Institute of Health, Tokyo, Japan..
SOURCE: VIROLOGY, (1989 Dec) 173 (2) 674-82. Journal code: XEA. ISSN: 0042-6822.
PUB. COUNTRY: United States

Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199003
AB Recombinant baculoviruses containing the coding sequences of the viral structural proteins, i.e., the capsid (C) protein, the precursor to premembrane (preM) protein, and the envelope (E) protein, as well as a nonstructural protein, NS1, of **Japanese encephalitis** virus (**JEV**) were constructed. Infection of Spodoptera frugiperda cells with these recombinant viruses produced PreM and E proteins. The E proteins synthesized by the recombinants were shown to be glycosylated and similar in size to the authentic E protein. The E protein was found on the surface of infected cells. The antigenic properties of recombinant E proteins were evaluated using a panel of monoclonal antibodies produced against **JEV** E protein. It was demonstrated that all of the epitopes detectable on the authentic **JEV** E protein were present on the recombinant E protein expressed by a recombinant baculovirus containing the coding sequence for a part of C, PreM, E, and a part of NS1 proteins. However, for E protein expressed by a recombinant baculovirus having the coding sequence of only a part of PreM, but all of E and a part of NS1, one of the flavivirus cross-reactive epitopes was not detected. Mice **immunized** with cells infected with the recombinant baculoviruses developed neutralization antibodies.

L8 ANSWER 40 OF 42 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 84051078 MEDLINE
DOCUMENT NUMBER: 84051078
TITLE: Broad-spectrum antiviral activity of 2-beta-D-ribofuranosylselenazole-4-carboxamide, a new antiviral agent.
AUTHOR: Kirsi J J; North J A; McKernan P A; Murray B K; Canonico P G; Huggins J W; Srivastava P C; Robins R K
SOURCE: ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1983 Sep) 24 (3) 353-61.
Journal code: 6HK. ISSN: 0066-4804.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198402
AB The relative in vitro antiviral activities of three related nucleoside carboxamides, ribavirin (1-beta-D-ribofuranosyl-1,2,4-triazole-3-carboxamide), tiazofurin (2-beta-D-ribofuranosylthiazole-4-carboxamide), and selenazole (2-beta-D-ribofuranosylselenazole-4-carboxamide), were studied against selected DNA and RNA viruses. Although the activity of selenazole against different viruses varied, it was significantly more potent than ribavirin and

tiazofurin against all tested representatives of the families Paramyxoviridae (parainfluenza virus type 3, mumps virus, measles virus), Reoviridae (reovirus type 3), Poxviridae (**vaccinia** virus), Herpes-viridae (herpes simplex virus types 1 and 2), Togaviridae (Venezuelan equine encephalomyelitis virus, yellow fever virus, **Japanese encephalitis** virus), Bunyaviridae (Rift Valley fever virus, sandfly fever virus [strain Sicilian], Korean hemorrhagic fever virus), Arenaviridae (Pichinde virus), Picornaviridae (coxsackieviruses B1 and B4, echovirus type 6, encephalomyocarditis virus), Adenoviridae (adenovirus type 2), and Rhabdoviridae (vesicular stomatitis virus). The antiviral activity of selenazole was also cell line dependent, being greatest in HeLa, **Vero**-76, and **Vero** E6 cells. Selenazole was relatively nontoxic for **Vero**, **Vero**-76, **Vero** E6, and HeLa cells at concentrations of up to 1,000 micrograms/ml. The relative plating efficiency at that concentration was over 90%. The effects of selenazole on viral replication were greatest when this agent was present at the time of viral infection. The removal of selenazole from the medium of infected cells did not reverse the antiviral effect against **vaccinia** virus, but there was a gradual resumption of viral replication in cells infected with parainfluenza type 3 or herpes simplex virus type 1 (strain KOS). However, the antiviral activity of ribavirin against the same viruses was reversible when the drug was removed.

L8 ANSWER 41 OF 42 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 75151107 MEDLINE
DOCUMENT NUMBER: 75151107
TITLE: The interference by **Japanese encephalitis** virus with Newcastle disease virus in **Vero** cells.
AUTHOR: Mifune K; Makino Y
SOURCE: INTERVIROLOGY, (1974) 4 (3) 150-61.
Journal code: GW7. ISSN: 0300-5526.
PUB. COUNTRY: Switzerland
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 197509

L8 ANSWER 42 OF 42 JAPIO COPYRIGHT 2000 JPO
ACCESSION NUMBER: 2000-083657 JAPIO
TITLE: **JAPANESE ENCEPHALITIS** VIRUS **VACCINE**
INVENTOR: KUZUHARA SHOJI; TOTSUKA ATSUKO; ETO AKIRA; NISHIYAMA KIYOTO; KINO YOICHIRO
PATENT ASSIGNEE(S): CHEMO SERO THERAPEUT RES INST)
PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 2000083657A		20000328	Heisei	C12N007-02

JP
APPLICATION INFORMATION
ST19N FORMAT: JP1999-188308 19990702
ORIGINAL: JP11188308 Heisei
PRIORITY APPLN. INFO.: JP1999 197040 19990713
SOURCE: PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 2000
AN 2000-083657 JAPIO
AB PROBLEM TO BE SOLVED: To efficiently obtain **Japanese encephalitis** viruses or their antigen components useful for producing **vaccines**, etc., in a high yield by infecting established cells with the **Japanese encephalitis** viruses, culturing the infected cells and purifying the viruses or their antigen components from the culture product.
SOLUTION: This method for preparing **Japanese encephalitis** viruses or their antigen components comprises infecting established cells, such as animal or insect-originated cells, selected from the group consisting of **Vero** cells, GL37 cells (FERM P-16857), HmLu-1 cells, BHK-21 cells, MDCK cells and C6/36 cells with **Japanese encephalitis** viruses such as Beijin-1 strain or Nakayama strain, culturing the virus-injected cells by a static culture method, a roller bottle culture method, a suspension culture method, etc., and subsequently purifying the viruses or their antigen components from the culture product by a purification method such as a concentration method using an ultrafiltration membrane or an ion exchange or adsorption chromatography. The obtained **Japanese encephalitis** viruses or their antigenic components are preferably used to prepare **Japanese encephalitis** virus **vaccines**.
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(FILE 'CAPLUS, MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO, TOXLIT, TOXLINE, PHIC, PHIN' ENTERED AT 12:02:18 ON 27 SEP 2000)

- Author (s)

L9	51084	SEA	ABB=ON	PLU=ON	KIM H?/AU
L10	490	SEA	ABB=ON	PLU=ON	YOO W?/AU
L11	71138	SEA	ABB=ON	PLU=ON	KIM S?/AU
L12	86162	SEA	ABB=ON	PLU=ON	LEE S?/AU
L13	3206	SEA	ABB=ON	PLU=ON	MOON S?/AU
L14	14557	SEA	ABB=ON	PLU=ON	HONG S?/AU
L15	6974	SEA	ABB=ON	PLU=ON	SHIN Y?/AU
L16	8680	SEA	ABB=ON	PLU=ON	CHUNG Y?/AU
L17	271	SEA	ABB=ON	PLU=ON	ECKELS K?/AU
L18	375	SEA	ABB=ON	PLU=ON	INNIS B?/AU
L19	0	SEA	ABB=ON	PLU=ON	PUINAK J?/AU

Searcher : Shears 308-4994

L20	297	SEA ABB=ON PLU=ON	BINN L?/AU
L21	7245	SEA ABB=ON PLU=ON	SRIVASTAVA A?/AU
L22	2896	SEA ABB=ON PLU=ON	DUBOIS D?/AU
L23	69	SEA ABB=ON PLU=ON	PUTNAK J?/AU
L24	2	SEA ABB=ON PLU=ON	L9 AND L10 AND L11 AND L12 AND L13 AND L14 AND L15 AND L16 AND L17 AND L18 AND L20 AND L21 AND L22 AND L23
L25	6408	SEA ABB=ON PLU=ON	L9 AND (L10 OR L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L26	74	SEA ABB=ON PLU=ON	L10 AND (L11 OR L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L27	4954	SEA ABB=ON PLU=ON	L11 AND (L12 OR L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L28	1698	SEA ABB=ON PLU=ON	L12 AND (L13 OR L14 OR L15 OR L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L29	56	SEA ABB=ON PLU=ON	L13 AND (L14 OR L15 OR L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L30	165	SEA ABB=ON PLU=ON	L14 AND (L15 OR L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L31	26	SEA ABB=ON PLU=ON	L15 AND (L16 OR L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L32	3	SEA ABB=ON PLU=ON	L16 AND (L17 OR L18 OR L20 OR L21 OR L22 OR L23)
L33	133	SEA ABB=ON PLU=ON	L17 AND (L18 OR L20 OR L21 OR L22 OR L23)
L34	40	SEA ABB=ON PLU=ON	L18 AND (L20 OR L21 OR L22 OR L23)
L35	33	SEA ABB=ON PLU=ON	L20 AND (L21 OR L22 OR L23)
L36	9	SEA ABB=ON PLU=ON	L21 AND (L22 OR L23)
L37	3	SEA ABB=ON PLU=ON	L22 AND L23
L38	6	SEA ABB=ON PLU=ON	(L25 OR L26 OR L27 OR L28 OR L29 OR L30 OR L33 OR L34 OR L35) AND L2
L39	35	SEA ABB=ON PLU=ON	L24 OR L31 OR L32 OR L36 OR L37 OR L38
L40	22	DUP REM L39 (13 DUPLICATES REMOVED)	

L40 ANSWER 1 OF 22 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER:	2000:636179 CAPLUS
TITLE:	Recombinant vaccine made in e. coli against dengue virus
INVENTOR(S):	**Srivastava, Ashok Kumar**; **Putnak, J. Robert**; Hoke, Charles H.; Warren, Richard L.
PATENT ASSIGNEE(S):	The United States of America as Represented by the Secretary of the Army, USA
SOURCE:	U.S., 16 pp. CODEN: USXXAM
DOCUMENT TYPE:	Patent
LANGUAGE:	English

Searcher : Shears 308-4994

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6117640	A	20000912	US 1995-433263	19950502

AB A recombinant protein encompassing a C-terminal protion from the structural envelope glycoprotein and an N-terminal portion from non-structural protein one of dengue type 2 virus was expressed in Escherichia coli as a fusion protein with Staphylococcal protein A. The recombinant protein was found to provide protection against lethal challenge with dengue 2 in mice.

REFERENCE COUNT: 13
REFERENCE(S):
(1) Acsadi, G; Nature 1991, V352, P815 CAPLUS
(3) Anon; WO 9202548 1992 CAPLUS
(4) Eckels; Amer J Trop Med and Hygiene 1994, V50(4), P472 CAPLUS
(5) Feighny; Amer J Trop Med and Hygiene 1994, V50(3), P322 CAPLUS
(6) Fonseca; Vaccine 1994, V12(3), P279 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 2 OF 22 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 1
ACCESSION NUMBER: 1999:189180 CAPLUS
DOCUMENT NUMBER: 130:213608
TITLE: An attenuated **Japanese encephalitis** virus adapted to **Vero** cell and a **Japanese encephalitis** vaccine
INVENTOR(S): **Kim, Hyun Su; Yoo, Wang Don; Kim, Soo Ok; Lee, Sung Hee; Moon, Sang Bum; Hong, Sun Pyo; Shin, Yong Cheol; Chung, Yong Ju ; Eckels, Kenneth H.; Innis, Bruce; Putnak, Joseph R.; Binn, Leonard N.; Srivastava, Ashok K.; Dubois, Doria R.**
PATENT ASSIGNEE(S): Cheil Jedang Corporation, S. Korea; Walter Reed Army Institute of Research
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9911762	A1	19990311	WO 1998-KR259	19980825

Searcher : Shears 308-4994

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9890047	A1	19990322	AU 1998-90047	19980825
EP 1025209	A1	20000809	EP 1998-941885	19980825
R: BE, CH, DE, DK, ES, FR, GB, IT, LI, NL				
PRIORITY APPLN. INFO.:			KR 1997-42001	19970828
			KR 1997-42002	19970828
			WO 1998-KR259	19980825

AB SThe present invention relates to an attenuated **Japanese encephalitis** virus adapted to **Vero** cell by passages on **Vero** cell and a **Japanese encephalitis** vaccine comprising said attenuated virus. **Japanese encephalitis** virus adapted to **Vero** cell after 4 passage was used for prepn. of a vaccine. The titer of neutralizing antibodies (the reciprocal of serum diln. resulting in 50% redn. of mouse brain passaged Nakayama virus plaques) for both purified, inactivated virus (PIV) and live, attenuated virus in mice at a dose of 5 .mu.g was 1:320. Mice were immunized with 2 inoculations of test vaccines (comprising PIV) spaced 3 wk apart, then challenged with 500 pfu of mouse-neurovirulent Nakayama virus. Mice immunized with 500 ng of PIV or 50 ng PIV and alum showed 100% protection.

REFERENCE COUNT: 3
REFERENCE(S):
(1) Division Of Microbiology; EP 0562136 A1 1993
(2) Nippon Zoki Pharmaceut Co Ltd; JP 01117780 A 1989
(3) Tekada Chem Ind Ltd; JP 02223531 A 1990

L40 ANSWER 3 OF 22 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-503106 [45] WPIDS
DOC. NO. CPI: C2000-150981
TITLE: Pseudopeptide derivatives, process for preparing the same and composition for Ras mutation cell growth inhibition containing - the same NoAbstract.
DERWENT CLASS: B04
INVENTOR(S): **CHUNG, Y H**; HWANG, H J; KIM, J G; LEE, B Y; **SHIN, Y A**; UHM, H D
PATENT ASSIGNEE(S): (YUHA-N) YUHAN CORP
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

KR 99057487	A	19990715 (200045)*

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
KR 99057487	A	KR 1997-77539	19971230

PRIORITY APPLN. INFO: KR 1997-77539 19971230
**** DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L40 ANSWER 4 OF 22 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-245100 [21] WPIDS
TITLE: Method for stiffening structure by increasing terminal stiffness of a stiffener - NoAbstract.
DERWENT CLASS: Q44
INVENTOR(S): **CHUNG, Y S**; HAN, M Y; HWANG, U S; LEE, C D; **SHIN, Y S**
PATENT ASSIGNEE(S): (BOND-N) BOND CONSTR IND JH T S; (HANM-I) HAN M Y
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
KR 99019541	A	19990315	(200021)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
KR 99019541	A	KR 1997-42929	19970829

PRIORITY APPLN. INFO: KR 1997-42929 19970829
**** DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L40 ANSWER 5 OF 22 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-245098 [21] WPIDS
TITLE: Method for stiffening structure by enlarging terminal cross section of stiffener - NoAbstract.
DERWENT CLASS: Q44
INVENTOR(S): **CHUNG, Y S**; HAN, M Y; HONG, Y G; **SHIN, Y S**; YEON, G S
PATENT ASSIGNEE(S): (BOND-N) BOND CONSTR IND JH T S; (HANM-I) HAN M Y
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
KR 99019539	A	19990315	(200021)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
KR 99019539	A	KR 1997-42927	19970829

PRIORITY APPLN. INFO: KR 1997-42927 19970829
**** DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L40 ANSWER 6 OF 22 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 2000-219863 [19] WPIDS
TITLE: Double torch type gas brazing robot system - NoAbstract.
DERWENT CLASS: P62
INVENTOR(S): **CHUNG, Y G; SHIN, Y S**
PATENT ASSIGNEE(S): (HYUN-N) HYUNDAI MOTOR CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
KR 99015163	A	19990305	(200019)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
KR 99015163	A	KR 1997-37075	19970802

PRIORITY APPLN. INFO: KR 1997-37075 19970802
**** DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L40 ANSWER 7 OF 22 TOXLIT
ACCESSION NUMBER: 1999:6566 TOXLIT
DOCUMENT NUMBER: CA-130-213608U
TITLE: An attenuated **Japanese encephalitis** virus adapted to **Vero** cell and a **Japanese encephalitis** vaccine.
AUTHOR: **Kim HS; Yoo WD; Kim SO; Lee SH; Moon SB; Hong SP; Shin YC; Chung YJ; Eckels KH**; et al.
SOURCE: (1999). PCT Int. Appl. PATENT NO. 9911762 03/11/1999
Searcher : Shears 308-4994

(Walter Reed Army Institute of Research).
CODEN: PIXXD2.
PUB. COUNTRY: KOREA, REPUBLIC OF
DOCUMENT TYPE: Patent
FILE SEGMENT: CA
LANGUAGE: English
OTHER SOURCE: CA 130:213608
ENTRY MONTH: 199904
AB SThe present invention relates to an attenuated **Japanese encephalitis** virus adapted to **Vero** cell by passages on **Vero** cell and a **Japanese encephalitis** vaccine comprising said attenuated virus. **Japanese encephalitis** virus adapted to **Vero** cell after 4 passage was used for prepn. of a vaccine. The titer of neutralizing antibodies (the reciprocal of serum diln. resulting in 50% redn. of mouse brain passaged Nakayama virus plaques) for both purified, inactivated virus (PIV) and live, attenuated virus in mice at a dose of 5 .mu.g was 1:320. Mice were immunized with 2 inoculations of test vaccines (comprising PIV) spaced 3 wk apart, then challenged with 500 pfu of mouse-neurovirulent Nakayama virus. Mice immunized with 500 ng of PIV or 50 ng PIV and alum showed 100% protection.

L40 ANSWER 8 OF 22 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 2
ACCESSION NUMBER: 1999:521364 CAPLUS
DOCUMENT NUMBER: 131:278534
TITLE: Fluorescence intensity changes for anthrylazacrown ethers by paramagnetic metal cations
AUTHOR(S): Chang, Jeong Ho; Kim, Hae Joong; Park, Jeung Hee; **Shin, Young-Kook**; **Chung, Yongseog**
CORPORATE SOURCE: Department of Chemistry, Chungbuk National University, Cheongju, 361-763, S. Korea
SOURCE: Bull. Korean Chem. Soc. (1999), 20(7), 796-800
CODEN: BKCSDE; ISSN: 0253-2964
PUBLISHER: Korean Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Three anthrylazacrown ethers in which the anthracene fluorophore .pi. system is sepd. from the electron donor atoms by 1 methylene group were synthesized, and their photophys. study was accomplished. These fluorescent compds. showed a max. fluorescence intensity at pH = 5 in aq. solns. and a decrease in fluorescence intensity upon binding of paramagnetic metal cations (Mn2+(d5), Co2+(d7), Cu2+(d9)). The decrease in fluorescence intensity may be attributed to the paramagnetic effect of metal cations to deactivate the excited state by the nonradiative quenching process. The benzylic N plays a role in changing fluorescence intensity. From the obsd.

linear Stern-Volmer plot and the fluorescence lifetime independence of the presence of metal ions, it was inferred that the chelation enhanced fluorescence quenching (CHEQ) mechanism in the system is a ground state static quenching process. Enhanced fluorescence was also obsd. when an excess Na+ ion was added to the quenched aq. soln., and it was attributed to cation displacement of a complexed fluorescence quencher.

REFERENCE COUNT: 27
REFERENCE(S):
(1) Akkaya, E; J Am Chem Soc 1990, V112, P3590 CAPLUS
(3) Bell, T; J Am Chem Soc 1986, V108, P8109 CAPLUS
(4) Brimage, D; J Chem Soc Chem Commun 1971, P1385 CAPLUS
(6) Chandross, E; Chem Phys Lett 1971, V9, P393 CAPLUS
(7) Cox, G; J Am Chem Soc 1984, V106, P422 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 3
ACCESSION NUMBER: 1999:66919 BIOSIS
DOCUMENT NUMBER: PREV199900066919
TITLE: Biological control of fusarium wilt of cucumber by chitinolytic bacteria.
AUTHOR(S): Singh, Pushpinder Paul; **Shin, Yong Chul**; Park, Chang Seuk; **Chung, Young Ryun (1)**
CORPORATE SOURCE: (1) Dep. Microbiol., Gyeongsang Natl. Univ., Chinju 660-701 South Korea
SOURCE: Phytopathology, (Jan., 1999) Vol. 89, No. 1, pp. 92-99.
ISSN: 0031-949X.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Two chitinolytic bacterial strains, Paenibacillus sp. 300 and Streptomyces sp. 385, suppressed Fusarium wilt of cucumber (Cucumis sativus) caused by Fusarium oxysporum f. sp. cucumerinum in nonsterile, soilless potting medium. A mixture of the two strains in a ratio of 1:1 or 4:1 gave significantly ($P < 0.05$) better control of the disease than each of the strains used individually or than mixtures in other ratios. Several formulations were tested, and a zeolite-based, chitosan-amended formulation (ZAC) provided the best protection against the disease. Dose-response studies indicated that the threshold dose of 6 g of formulation per kilogram of potting medium was required for significant ($P < 0.001$) suppression of the disease. This dose was optimum for maintaining high rhizosphere population densities of chitinolytic bacteria (log 8.1 to log 9.3 CFU/g dry weight of potting medium), which were required for the control of Fusarium wilt. The ZAC formulation was suppressive when

added to pathogen-infested medium 15 days before planting cucumber seeds. The formulation also provided good control when stored for 6 months at room temperature or at 4degreeC. Chitinase and beta-1,3-glucanase enzymes were produced when the strains were grown in the presence of colloidal chitin as the sole carbon source. Partial purification of the chitinases, followed by sodium dodecyl sulfate polyacrylamide gel electrophoresis and activity staining, revealed the presence of five bands with molecular masses of 65, 62, 59, 55, and 52 kDa in the case of Paenibacillus sp. 300; and three bands with molecular masses of 52, 38, and 33 kDa in the case of Streptomyces sp. 385. Incubation of cell walls of F. oxysporum f. sp. cucumerinum with partially purified enzyme fractions led to the release of N-acetyl-D-glucosamine (NAGA). NAGA content was considerably greater when pooled enzyme fractions (64 to 67) from Paenibacillus sp. were used, because they contained high beta-1,3-glucanase activity in addition to chitinase activity. Suppression of Fusarium wilt of cucumber by a combination of these two bacteria may involve the action of these hydrolytic enzymes.

L40 ANSWER 10 OF 22 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1999-335617 [28] WPIDS
TITLE: Process for preparing nucleocapside protein from Hantann virus 76-118 and diagnostic agent for hemorrhagic fever with renal syndrome - NoAbstract.
DERWENT CLASS: B05
INVENTOR(S): **CHUNG, Y J**; HONG, S P; KIM, H S; KIM, S O; MOON, S B; NOH, G S; **SHIN, Y C**; YOO, W D
PATENT ASSIGNEE(S): (CHEI-N) CHEIL FOODS & CHEM INC
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
KR 98026286	A	19980715	(199928)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
KR 98026286	A	KR 1996-44667	19961004

PRIORITY APPLN. INFO: KR 1996-44667 19961004
**** DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L40 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 4
ACCESSION NUMBER: 1998:733317 CAPLUS
DOCUMENT NUMBER: 130:121894

TITLE: Characterization of an attenuated **Japanese encephalitis** virus adapted to African green monkey kidney cells, **Vero**

AUTHOR(S): **Chung, Yong-Ju; Hong, Sun Pyo ; Moon, Sang Beom; Shin, Young-Cheol; Kim, Soo-Ok**

CORPORATE SOURCE: R & D Center, Cheiljedang Corp., Kyonggi-Do, 467-810, S. Korea

SOURCE: J. Microbiol. (Seoul) (1998), 36(3), 189-195
CODEN: JOMIFG; ISSN: 1225-8873

PUBLISHER: Microbiological Society of Korea

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Live attenuated **Japanese encephalitis** (**JE**) virus SA14-14-2 produced in primary dog kidney cells (PDK) was adapted to African green monkey kidney cells, **Vero** . In an effort to gain insight into the mol. basis of the biol. characteristics of the isolated SA14-14-2 (**Vero**) strain, the 1500 nucleotide sequence encoding the envelope (E) gene which possesses major neutralizing epitopes was detd. and compared with the sequences of two other attenuated JE virus strains, SA14-14-2 (PHK) and SA14-14-2 (PDK). The amino acid sequence of the C-terminal region (a.a. 280-500) of the SA14-14-2 (**Vero**) E gene was identical to those of strains SA14-14-2 (PHK) and SA14-14-2 (PDK), while the N-terminal region (a.a. 1-279) showed sequence variation. The distribution of mutations in the N-terminal region was nearly the same among the three attenuated strains, suggesting that the N-terminal sequences might be related with virus-host cell specificity. However, it was found that Lys and Val (a.a.138 and 176, resp.), known to be responsible for attenuation, are still conserved in SA14-14-2 (**Vero**). Animal testing showed that SA14-14-2 (**Vero**) has a neurovirulence phenotype similar to that of the parent SA14-14-2 (PDK) strain in suckling mice. The SA14-14-2 (**Vero**) grew very efficiently in **Vero** cells enough to support vaccine prodn. The growth characteristics of SA14-14-2 (**Vero**) in **Vero** cell and conservation of attenuation determinant of neurovirulence support that SA14-14-2 (**Vero**) could be developed as a new vaccine strain for human use.

REFERENCE COUNT: 20

REFERENCE(S):

(8) Hasegawa, H; Virology 1992, V191, P158 CAPLUS

(9) Heinz, F; Adv Virus Res 1986, V31, P103 CAPLUS

(10) Holzmann, H; J Virol 1990, V64, P5156 CAPLUS

(12) Ni, H; J Gen Virol 1995, V76, P401 CAPLUS

(13) Ni, H; J Gen Virol 1995, V76, P409 CAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 12 OF 22 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:709242 CAPLUS
DOCUMENT NUMBER: 128:56770
TITLE: Preparation and characteristics of Ag(I)-ion selective electrode using PDA (6,9,12-trioxa-3,15,21-triazabicyclo[15.3.1]heneicosa-1(21),17,19-triene-2,16-dione) and NdienOenH4 (1,12,15-triaza-3,4:9,10-dibenzo-5,8-dioxacycloheptadecane)
AUTHOR(S): Kim, Hae Joong; Lee, Dong Geun; Chang, Jeong Ho; **Chung, Yong Seog; Shin, Young-Kook**
CORPORATE SOURCE: Dep. Chem., Chungbuk Natl. Univ., Cheongju, 361-763, S. Korea
SOURCE: J. Korean Chem. Soc. (1997), 41(10), 547-551
CODEN: JKCSEZ; ISSN: 1017-2548
PUBLISHER: Korean Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Effects of the title film electrode compns. and interference ions (Na, K, Mg, Ca, Co, Ni, Cu, Zn, Cd) on the Ag(I) ion selectivity and sensitivity and pH on p.d. were studied. PDA-PVC-DOP (34:20:46) and NdienOenH4-PVC (75.9:25) film electrodes showed good sensitivity slopes (52.3 and 56.0 mV/decade, resp.) and sensitivity range (1.0 x 10-2 to 1.0 x 10-5 M) at relative wide pH range.

L40 ANSWER 13 OF 22 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 96:893575 SCISEARCH
THE GENUINE ARTICLE: VV272
TITLE: Development of a purified, inactivated, dengue-2 virus vaccine prototype in **vero** cells: Immunogenicity and protection in mice and rhesus monkeys
AUTHOR: Putnak R; Barvir D A; Burrous J M; **Dubois D R**; DAndrea V M; Hoke C H; Sadoff J C; **Eckels K H (Reprint)**
CORPORATE SOURCE: WALTER REED ARMY MED CTR, WALTER REED ARMY INST RES, DEPT BIOL RES, WASHINGTON, DC 20307 (Reprint); WALTER REED ARMY MED CTR, WALTER REED ARMY INST RES, DEPT BIOL RES, WASHINGTON, DC 20307; US FDA, DIV CLIN LAB DEVICES, ROCKVILLE, MD 20857; MERCK RES LABS, BLUE BELL, PA
COUNTRY OF AUTHOR: USA
SOURCE: JOURNAL OF INFECTIOUS DISEASES, (DEC 1996) Vol. 174, No. 6, pp. 1176-1184.
Publisher: UNIV CHICAGO PRESS, 5720 S WOODLAWN AVE,

CHICAGO, IL 60637.
ISSN: 0022-1899.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 49

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The feasibility of a purified, inactivated dengue (DEN) vaccine made in **Vero** cells was explored, A DEN-2 virus candidate was chosen for production of a monotypic, purified, inactivated vaccine (PIV), Virus was harvested from roller bottle culture supernatants, concentrated, and purified on sucrose gradients. The purified virus was inactivated with 0.05% formalin at 22 degrees C. After inactivation, the virus retained its antigenicity and was immunogenic in mice and rhesus monkeys, in which it elicited high titers of DEN-2 virus-neutralizing antibody. Mice were completely protected against challenge with live, virulent virus after receiving two 0.15-mu g doses of PIV. Monkeys vaccinated with three doses ranging as low as 0.25 mu g demonstrated complete absence or a significant reduction in the number of days of viremia after challenge with homologous virus. These results warrant further testing and development of PIVs for other DEN virus serotypes.

L40 ANSWER 14 OF 22 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 5

ACCESSION NUMBER: 1995:928804 CAPLUS
DOCUMENT NUMBER: 123:336855

TITLE: Mice immunized with a dengue type 2 virus E and NS1 fusion protein made in Escherichia coli are protected against lethal dengue virus infection

AUTHOR(S): **Srivastava, Ashok Kumar**; **Putnak, Joseph Robert**; Warren, Richard Lloyd; Hoke, Charles Hearn
CORPORATE SOURCE: Department of Virus Diseases, Walter Reed Army Institute of Research, Washington, DC, 20307-5100, USA

SOURCE: Vaccine (1995), Volume Date 1995, 13(13), 1251-8
CODEN: VACCDE; ISSN: 0264-410X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A gene fragment encoding the C-terminal 204 amino acids (AA) from the structural envelope glycoprotein (E) and the N-terminal 65 AA from non-structural protein one (NS1) of dengue type 2 virus (DEN-2) was expressed in Escherichia coli (E. coli) as a fusion protein with staphylococcal protein A. The recombinant fusion protein was purified and analyzed for its antigenicity, its immunogenicity and its ability to protect mice against lethal challenge with live DEN-2 virus. The recombinant protein was reactive with anti-DEN-2 polyclonal and monoclonal antibodies. Mice immunized with the purified fusion protein made anti-DEN-2 antibodies measured by the

hemagglutination-inhibition (HI) and neutralization (N) tests, and were protected against lethal challenge with DEN-2 virus administered by intracranial inoculation.

L40 ANSWER 15 OF 22 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:407838 CAPLUS
DOCUMENT NUMBER: 123:94575
TITLE: Recognition of Ag(I) ion by pyridino-azacrown ethers and N3O2-donor azacrown ether
AUTHOR(S): Lee, Dong Geun; **Chung, Yongseog**; **Shin, Young-Kook**
CORPORATE SOURCE: Dep. Chem., Chungbuk National Univ., Cheongju, 360-763, S. Korea
SOURCE: J. Korean Chem. Soc. (1995), 39(2), 114-17
CODEN: JKCSEZ; ISSN: 1017-2548
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Extn. equil. consts. and free energy parameters for aza crown ethers and transition metal cations were detd. in H2O-CHCl3 system at 25.degree.. Selectivity coeffs. for Ag+-selective electrodes based on the aza crown ethers are also reported.

L40 ANSWER 16 OF 22 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1994:712583 CAPLUS
DOCUMENT NUMBER: 121:312583
TITLE: Syntheses and properties of new liquid crystalline compounds derived from hexaazatriphenylene
AUTHOR(S): **Chung, Yongseog**; Hwang, Dong-Jin; **Shin, Young-Kook**
CORPORATE SOURCE: Dep. Chem., Chungbuk Natl. Univ., Cheongju, 360-763, S. Korea
SOURCE: J. Korean Chem. Soc. (1994), 38(7), 533-6
CODEN: JKCSEZ; ISSN: 1017-2548
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Hexaazatriphenylene hexaalkyl esters were prepd. and tested for liq.-cryst. behavior by DCS.

L40 ANSWER 17 OF 22 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1993:657375 CAPLUS
DOCUMENT NUMBER: 119:257375
TITLE: Molecular interaction of dimethyl sulfoxide with water and alkanols: a vapor pressure osmometry study
AUTHOR(S): Kim, Eung Gyun; **Chung, Yongseog**; **Shin, Young Kook**
CORPORATE SOURCE: Dep. Chem., Chungbuk Natl. Univ., Cheongju, 360-763, S. Korea

SOURCE: J. Korean Chem. Soc. (1993), 37(8), 753-6
CODEN: JKCSEZ; ISSN: 1017-2548
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies on the mol. interactions of DMSO with water and/or some alkanols were carried out by vapor pressure osmometry at 40.degree.. Neg. deviation from Raoult's law was obsd. for the DMSO-water, methanol, ethanol, 1-propanol, 2-propanol, and 2-methyl-1-propanol systems, whereas pos. deviation from Raoult's law was obsd. for the DMSO-1-butanol and 1-pentanol systems. The results were interpreted in terms of mol. interactions between unlike mols., and of self-assocn. of DMSO mols., resp. Measured chem. shift of hydroxyl proton of the solvents also supported the results.

L40 ANSWER 18 OF 22 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 6
ACCESSION NUMBER: 1993:551985 CAPLUS
DOCUMENT NUMBER: 119:151985
TITLE: Effects of barbiturates on the rotational relaxation time of 1,6-diphenyl-1,3,5-hexatriene in native and model membranes
AUTHOR(S): **Chung, Yong Za**; **Shin, Yong Hee**; Choi, Chang Hwa; Park, Hyung Sook; Koh, Yeong Sim; Yun, Il
CORPORATE SOURCE: Coll. Pharm., Kyungsung Univ., Pusan, 608-736, S. Korea
SOURCE: Arch. Pharmacal Res. (1992), 15(4), 298-303
CODEN: APHRDQ; ISSN: 0253-6269
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Synaptosomal plasma membrane vesicles (SPMV) were isolated from fresh bovine cerebral cortex. The effects of barbiturates on the rotational relaxation time of 1,6-diphenyl-1,3,5-hexatriene (DPH) in intact SPMV and model membranes of total lipids (SPMVTL) and phospholipids (SPMVPL) extd. from SPMV were examd. Barbiturates decreased the rotational relaxation time of DPH in intact SPMV in a dose-dependent manner. In contrast, they did not affect the rotational relaxation time of DPH in SPMVTL and even dose-dependently increased the rotational relaxation time of DPH in SPMVPL.

L40 ANSWER 19 OF 22 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1993:62439 BIOSIS
DOCUMENT NUMBER: PREV199344028089
TITLE: Immunization of rhesus monkeys with baculovirus recombinant dengue 4 E protein.
AUTHOR(S): **Putnak, J. R. R. J. Feighny**; **Dubois, D. R.**; Strupczewski, K. L.; Ramsey, K. H.; Summers, P. L.; Burrous, M. J.; Hoke, C. H.
CORPORATE SOURCE: Div. Communicable Dis. and Immunol., Walter Reed Army

Inst. Res., Washington, D.C
SOURCE: American Journal of Tropical Medicine and Hygiene, (1992) Vol. 47, No. 4 SUPPL., pp. 104.
Meeting Info.: 41st Annual Meeting of the American Society of Tropical Medicine and Hygiene, Seattle, Washington, USA, November 15-19, 1992. AM J TROP MED HYG
ISSN: 0002-9637.
DOCUMENT TYPE: Conference
LANGUAGE: English

L40 ANSWER 20 OF 22 BIOSIS COPYRIGHT 2000 BIOSIS DUPLICATE 7
ACCESSION NUMBER: 1991:276163 BIOSIS
DOCUMENT NUMBER: BA92:8778
TITLE: EFFECTS OF BARBITURATES ON THE FLUIDITY OF PHOSPHATIDYLETHANOLAMINE MODEL MEMBRANES.
AUTHOR(S): YUN I; KIM H-I; HWANG T-H; KIM J-R; KIM I-S; **CHUNG Y-Z**; **SHIN Y-H**; JUNG H-O; KANG J-S
CORPORATE SOURCE: DEP. ORAL BIOL. BIOPHYSICS, COLL. DENT., PUSAN NATL. UNIV. PUSAN 602-061, KOREA.
SOURCE: KOREAN J PHARMACOL, (1990) 26 (2), 209-218.
CODEN: KJPHE3. ISSN: 0377-9459.
FILE SEGMENT: BA; OLD
LANGUAGE: English
AB Intramolecular excimer formation with 1,3-di(1-pyrenyl)propane (Py-3-Py) and fluorescence polarization with 1,6-diphenyl-1,3,5-hexatriene (DPH) were used to evaluate the effects of barbiturates on the bulk fluidity of the model membranes of phosphatidylethanolamine fraction of synaptosomal plasma membrane vesicles (SPMVPE) isolated from bovine cerebral cortex. In the SPMVPE, barbiturates decreased the excimer to monomer fluorescence intensity ratio (I'/I) of Py-3-Py and increased the fluorescence polarization (P), anisotropy (r), limiting anisotropy (r8), order parameter (S) and rotational relaxation time (.hivin.P) of DPH in a dose-dependent manner. The relative potencies of barbiturates to order the SPMVPE were in the order: pentobarbital > hexobarbital > amobarbital > phenobarbital. Hence, it is concluded that barbiturates have ordering effects on the SPMVE. And the membrane-ordering potencies of barbiturates appear to be correlated with the potencies for enhancement of GABA-stimulated chloride infux and with the anesthetic effects of barbiturates.

L40 ANSWER 21 OF 22 CAPLUS COPYRIGHT 2000 ACS DUPLICATE 8
ACCESSION NUMBER: 1987:616528 CAPLUS
DOCUMENT NUMBER: 107:216528
TITLE: A study on the ultrastructural alterations of the mouse liver induced by the administration of large doses of fat soluble vitamins

AUTHOR(S): **Chung, Yong Won; Shin, Young Chul**
CORPORATE SOURCE: Coll. Med., Korea Univ., Seoul, S. Korea
SOURCE: Koryo Taehakkyo Uikwa Taehak Nonmunjip (1987), 24(1), 281-97
CODEN: KTUNDD
DOCUMENT TYPE: Journal
LANGUAGE: Korean

AB Ultrastructural alternations of the liver, esp. of the hepatocytes and Ito cells, were obsd. in mice parentally given doses of vitamin D, E, and K once a day for 10, 20, and 30 days, resp. Rough endoplasmic reticulum and polysomes were increased together in the hepatocytes and endothelial, Kupffer, and Ito cells of all groups given vitamins D, E, and K. Hepatocytes of mice given vitamin D showed accumulation of lipid-like materials in all the groups and were slightly enlarged in the 30 day group. Hepatocytes of mice given vitamin E were enlarged and stored glycogen particles in the 30 day group. Hepatocytes of mice given vitamin K were not enlarged, but showed accumulations of lipid-like materials in all the groups and of lipid droplets in the 30 day group. Lipid droplets were highly increased in the Ito cells of the 30 day group of vitamin E. The results suggest that the intrahepatic metab. is elevated for a period of time by hypervitaminosis D, E, and K and that the Ito cells are storage sites of vitamin E.

L40 ANSWER 22 OF 22 CONFSCI COPYRIGHT 2000 CSA
ACCESSION NUMBER: 1998:37709 CONFSCI
DOCUMENT NUMBER: 98-037709
TITLE: Unusual response in Rhesus monkeys vaccinated with a recombinant subunit dengue-2 E-NS1 fusion protein
AUTHOR: **Srivastava, A.K.**; Sullivan, J.L.; Putvatana, R.; Innis, B.L.; Simmons, M.; **Putnak, J.R.**
CORPORATE SOURCE: Dep. Virus Diseases and Dep. Biologics Res., Walter Reed Army Inst. Res., Washington, DC, USA
SOURCE: ASTMH, 60 Revere Drive, Suite 500, Northbrook, IL 60062, USA, Abstracts available. Price $10..
Meeting Info.: 981 5000: 46th Annual Meeting of the American Society of Tropical Medicine and Hygiene (9815000). Lake Buena Vista, FL (USA). 7-11 Dec 1997. American Society of Tropical Medicine and Hygiene.
DOCUMENT TYPE: Conference
FILE SEGMENT: DCCP
LANGUAGE: English

(FILE 'MEDLINE' ENTERED AT 12:13:51 ON 27 SEP 2000)

L41	877	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"ENCEPHALITIS VIRUS, JAPANESE"/CT
L42	4631	SEA	FILE=MEDLINE	ABB=ON PLU=ON	"VERO CELLS"/CT
L43	30	SEA	FILE=MEDLINE	ABB=ON PLU=ON	L41 AND L42
L44	5023	SEA	FILE=MEDLINE	ABB=ON PLU=ON	VACCINES/CT
L45	26397	SEA	FILE=MEDLINE	ABB=ON PLU=ON	VACCINATION/CT
L46	28610	SEA	FILE=MEDLINE	ABB=ON PLU=ON	IMMUNIZATION/CT
L47	3	SEA	FILE=MEDLINE	ABB=ON PLU=ON	L43 AND (L44 OR L45 OR L46)

-key terms

=> d 1-3 .beverlymed; fil hom

L47 ANSWER 1 OF 3 MEDLINE
AN 1999429344 MEDLINE
TI Immunization with plasmid DNA encoding the envelope glycoprotein of Japanese Encephalitis virus confers significant protection against intracerebral viral challenge without inducing detectable antiviral antibodies.
AU Ashok M S; Rangarajan P N
SO VACCINE, (1999 Aug 20) 18 (1-2) 68-75.
Journal code: X6O. ISSN: 0264-410X.
AB A plasmid DNA construct, pCMXENV encoding the envelope (E) glycoprotein of Japanese Encephalitis virus (JEV), was constructed. This plasmid expresses the E protein intracellularly, when transfected into Vero cells in culture. The ability of pCMXENV to protect mice from lethal JEV infection was evaluated using an intracerebral (i.c.) JEV challenge model. Several independent immunization and JEV challenge experiments were carried out and the results indicate that 51 and 59% of the mice are protected from lethal i.c. JEV challenge, when immunized with pCMXENV via intramuscular (i.m.) and intranasal (i.n.) routes respectively. None of the mice immunized with the vector DNA (pCMX) survived in any of these experiments. JEV-specific antibodies were not detected in pCMXENV-immunized mice either before or after challenge. JEV-specific T cells were observed in mice immunized with pCMXENV which increased significantly after JEV challenge indicating the presence of vaccination-induced memory T cells. Enhanced production of interferon-gamma (IFN-gamma) and complete absence of interleukin-4 (IL-4) in splenocytes of pCMXENV-immunized mice on restimulation with JEV antigens in vitro indicated that the protection is likely to be mediated by T helper (Th) lymphocytes of the Th1 sub-type. In conclusion, our results demonstrate that immunization with a plasmid DNA expressing an intracellular form of JEV E protein confers significant protection against i.c. JEV challenge even in the absence of detectable antiviral antibodies.

L47 ANSWER 2 OF 3 MEDLINE
AN 92024099 MEDLINE

TI Comparison of protective immunity elicited by recombinant vaccinia viruses that synthesize E or NS1 of Japanese encephalitis virus.
AU Konishi E; Pincus S; Fonseca B A; Shope R E; Paoletti E; Mason P W
SO VIROLOGY, (1991 Nov) 185 (1) 401-10.
Journal code: XEA. ISSN: 0042-6822.
AB Immunization with recombinant vaccinia viruses that specified the synthesis of Japanese encephalitis virus (JEV) glycoproteins protected mice from a lethal intraperitoneal challenge with JEV. Recombinants which coexpressed the genes for the structural glycoproteins, prM and E, elicited high levels of neutralizing (NEUT) and hemagglutination inhibiting (HAI) antibodies in mice and protected mice from a lethal challenge by JEV. Recombinants expressing only the gene for the nonstructural glycoprotein, NS1, induced antibodies to NS1 but provided low levels of protection from a similar challenge dose of JEV. Antibodies to the NS3 protein in postchallenge sera, representing the degree of infection with challenge virus, were inversely correlated to NEUT and HAI titers and levels of protection. These results indicate that although vaccinia recombinants expressing NS1 can provide some protection from lethal JEV infection, recombinants expressing prM and E elicited higher levels of protective immunity.

L47 ANSWER 3 OF 3 MEDLINE
AN 90244392 MEDLINE
TI Induction of protective immunity in animals vaccinated with recombinant vaccinia viruses that express PreM and E glycoproteins of Japanese encephalitis virus.
AU Yasuda A; Kimura-Kuroda J; Ogimoto M; Miyamoto M; Sata T; Sato T; Takamura C; Kurata T; Kojima A; Yasui K
SO JOURNAL OF VIROLOGY, (1990 Jun) 64 (6) 2788-95.
Journal code: KCV. ISSN: 0022-538X.
AB A cDNA clone representing the genome of structural proteins of Japanese encephalitis virus (JEV) was inserted into the thymidine kinase gene of vaccinia virus strains LC16mO and WR under the control of a strong early-late promoter for the vaccinia virus 7.5-kilodalton polypeptide. Indirect immunofluorescence and fluorescence-activated flow cytometric analysis revealed that the recombinant vaccinia viruses expressed JEV E protein on the membrane surface, as well as in the cytoplasm, of recombinant-infected cells. In addition, the E protein expressed from the JEV recombinants reacted to nine different characteristic monoclonal antibodies, some of which have hemagglutination-inhibiting and JEV-neutralizing activities. Radioimmunoprecipitation analysis demonstrated that two major proteins expressed in recombinant-infected cells were processed and glycosylated as the authentic PreM and E glycoproteins of JEV. Inoculation of rabbits with the infectious recombinant vaccinia virus resulted in rapid production of antiserum specific for the PreM and E glycoproteins of JEV. This antiserum had both hemagglutination-inhibiting and virus-neutralizing activities

against JEV. Furthermore, mice vaccinated with the recombinant also produced JEV-neutralizing antibodies and were resistant to challenge with JEV.

FILE 'HOME' ENTERED AT 12:17:55 ON 27 SEP 2000